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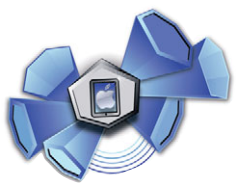
In This Issue...

FEATURE PACKAGE

Emerging Trends To Watch



We took four of the most-talked-about trends in the data center space and talked with experts to find out what you need to know.

The iPad Invades The Enterprise 22
LEED Certification On The Rise 23
Modular Data Centers 24
Next-Generation Firewalls Are On Their Way 26

PHYSICAL INFRASTRUCTURE

■ For the people who operate data centers, they understand that **surge protection and other power-related precautions** aren't just wise, they're essential as any amount of downtime can be counterproductive and costly ..... page 12

■ **Getting the most life out of your data center** means good maintenance, quality replacement parts, and several other factors. IT administrators have several options when it comes to expanding the life of their data center equipment and infrastructure ..... page 14

■ The new Data Aire Unity Cooling System combines fan modules, a server, an airflow measurement device, and the Unity Cooling software to **boost data center cooling while reducing energy consumption** ..... page 16

■ In response to tight budgets and increasing pressure on IT departments, Information Support Concepts has launched its new 42U series of **server racks** ..... page 17

■ **Buying Guide**: Power Distribution Units ..... page 17

■ **Product Spotlight**: Power Distribution Units ..... page 18

■ **Product Spotlight**: Environmental Monitoring .... page 20

SECURITY

■ Palo Alto Networks' PA-500 and PA-2000 series feature **next-generation firewall** technologies that supplant the port-blocking approach that traditional firewalls take so enterprises can apply a secure, business-minded approach to application usage ..... page 27

■ **Sidejacking** is of growing concern to IT security administrators. In such an attack, a hacker intercepts a cookie and then uses the information it contains to gain access to a Web-based service ..... page 27

■ Although encryption by itself does not ensure **PCI compliance**, it can be a powerful tool in reducing the scope of the actions necessary to comply with the standard ..... page 28

■ Network Box Data Leakage Prevention Software can scan your company's **email for sensitive and valuable information** ..... page 29

■ **Buying Guide**: Email Security Appliances ... page 29

■ **Product Spotlight**: Email Security Appliances ..... page 30

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Keep Your Network Up & Your Costs Down

CXtec® Helps SMEs Save Money & Increase Performance

by Kristina Brambila

• • •

CXtec® has more than 30 years of experience providing reliable products and services for data centers. Since its founding in 1978 as Reliance Used Computer Corp., CXtec (www.cxtec.com) has grown into an all-encompassing supplier of networking connectivity equipment and accessories. The company started out marketing used IBM System 370 mainframe options, including features, channels, and memory. CXtec soon began managing mainframe equipment, chillers, air handlers, and raised flooring supplies.

Throughout its lifespan, CXtec has increased its offerings to include IBM mainframe cables, voice equipment, and network cable products, as well as additional program divisions such as CABLExpress® (cabling infrastructure solutions), equal2new® (refurbished equipment), and LIFECYCLExpress® (IT asset management solutions). It wasn't until 2004 that the company officially changed its name to CXtec in order to better represent all of its products and services, the company says. Currently, CXtec is headquartered in North Syracuse, N.Y.

CABLExpress®

In 1980, CXtec created its CABLExpress division with the intent of distinguishing its data center and network cabling products from the company's other solutions. CABLExpress' offerings include its popular Skinny-Trunk® Solution—high-density, high-performance trunking and fiber cable solutions for data centers—which the company says is everything a cabling infrastructure needs to increase flexibility and improve performance in the data center. The Skinny-Trunk Solution includes fiber trunk assemblies, H-series enclosures, harnesses, enterprise fiber jumpers, and Z-mount brackets.

According to CXtec, the CABLExpress Skinny-Trunk Solution saves space in the data center by reducing cable congestion by up to 70%, making room for other equipment or expansion, and Skinny-Trunk is easy to install. "Our trunks significantly reduce installation time," says Peter Belyea, vice president of the CABLExpress division. "Plug-and-play technology saves you time and money on installation costs, while the MPO connection consolidates multiple fibers into a single connection," he says. And there are other benefits, too. "You can run up to 144 fibers in one trunk; plus, they come standard with a pulling eye option to make running your trunks much easier,"

Belyea says. "Having used the MTP connector since 2000, our connector loss performance leads the industry, assuring long-term data center standards compliance."

equal2new®

CXtec started its equal2new program in 1995 to better promote its refurbished networking and voice equipment. With the equal2new program, data center managers can acquire like-new equipment for a fraction of what it would cost to buy new, including switches, voice, transceivers/converters, bridges/routers, and WAN and LAN solutions.

CXtec prides itself on its certification process and boasts a 99.5% reliability rating. All products are evaluated in the company's 70,000-square-foot Technology Certification and Distribution Center, which is electrostatic discharge-protected and ISO 9001:2008-certified. Each equal2new product is given a barcode that is used to track its progress throughout the inspection process. The product's features are then thoroughly tested and put through live network monitoring to ensure proper functionality. Finally, hardware is cleaned and painted and securely packed before shipping.

"Customers can purchase equal2new networking and voice products from leading manufacturers that span from legacy and end-of-life products to equipment that's currently shipping new," says Frank Kobuszewski, vice president of CXtec's Technology Solutions Group. Those leading manufacturers include Cisco, Nortel, 3Com, HP, Avaya, and Mitel, among others.

LIFECYCLExpress®

One of CXtec's more recent programs, started in 2010, is LIFECYCLExpress, which offers a complete set of IT asset management services. Within the program, CXtec provides both technology remarketing, where customers can sell their used equipment for cash, credit, or trade, and IT asset disposal services that make it easy for data centers to recycle hardware in a safe, environmentally friendly manner.

Recycling e-waste can be a headache—where do you send your out-of-date hardware, and will that organization dispose of it properly? CXtec boasts affiliation and compliance with several respected recycling organizations, including NAID (National Association for Information Destruction), ISRI (Institute of Scrap Recycling Industries), and IRA (Investment Recovery Association). "E-waste is de-manufactured into dozens of raw commodities at our LIFECYCLExpress facility and then sent downstream to partners who are certified at the specific commodity level," Kobuszewski says.

To make IT recycling as simple as possible, CXtec offers its Green Cube®, a container that's sent to your facility, where you load it up with up to 1,000 pounds of e-waste and then send it back to CXtec to be disposed of. One price covers delivery, shipping, and recycling, and you can discard products such as used switches, routers, phones, UPS systems, and servers.

If your equipment is not ready to be recycled and still has market value, you can free up space in your data center by selling the equipment back to CXtec through its technology remarketing program. P

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1. **What is the size of your company (how many employees)?**
   - ❑ Less than 10
   - ❑ 10 to 99
   - ❑ 100 to 199
   - ❑ 200 to 499
   - ❑ 500 to 999
   - ❑ 1,000+

2. **How often do you purchase computer hardware/software?**
   - ❑ Weekly
   - ❑ Bi-weekly
   - ❑ Monthly
   - ❑ Quarterly
   - ❑ Annually
   - ❑ No Involvement

3. **What is your annual computer hardware/software purchasing budget?**
   - ❑ $0 to $9,999
   - ❑ $10,000 to $24,999
   - ❑ $25,000 to $49,999
   - ❑ $50,000 to $99,999
   - ❑ $100,000 to $249,999
   - ❑ $250,000 to $499,999
   - ❑ $500,000 to $999,000
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Also In This Issue...

STORAGE

■ Recently, **disk deduplication** has emerged as a popular way for enterprises to reduce the amount of data that must be stored and thus reduce associated costs..... page 32

■ Admins can help ensure their enterprise's tape backups are reliable, long-lasting, and cost-effective by establishing a **tape backup replacement cycle or policy**..... page 33

NETWORKING & VPN

■ CXtec has more than 30 years of experience providing reliable products and services for data centers and has grown into an all-encompassing supplier of **networking connectivity equipment and accessories**..... page 1

■ If your organization doesn't have a **wireless network**—or has a network with insufficient coverage or prohibitive security policies—it's likely that you'll eventually encounter unauthorized ("rogue") employee-installed wireless access points..... page 34

■ The 4ipnet HSG Wireless Hotspot Gateway, when combined with the Network Ticket Generator Kit, Smart Device Server 100, and PRT100 PoS printer, lets organizations quickly set up a **secure public or private hotspot** for customers or visitors..... page 34

■ Runaware's cloud platform is designed to make **launching applications in the cloud** as customizable and easy to do as possible..... page 35

SERVICES

■ Although an **outsourcer** can relieve strain from an overworked crew and possibly save money, the benefits offered by outsourcing aren't always a given ..... page 36

■ Apto Solutions is an expert at dealing with **decommissioned, excess, and off-lease hardware**... page 37

SERVERS

■ NEX Computing Solutions' NEX **1U server** can handle a variety of applications, making it an ideal fit for small and medium-sized businesses..... page 38

■ American Portwell's CAR-4010 modular **1U rackmount appliance** is designed for network security and management applications..... page 38

■ With Chenbro's new series of **server chassis**, 30 years of industry-leading and cutting-edge enclosure experience culminates in the design and execution of products you can count on..... page 39

■ **Product Spotlight**: Blade Servers ..... page 40

DATA CENTER MANAGEMENT

■ A federal incentive program means most doctors' offices will use **electronic patient files**, but first they'll need to overcome their fears ..... page 42

■ How do you know whether a warranty is worth it when it comes to **used or refurbished equipment?**..... page 43

The Processor.com home page is frequently updated with new articles and hardware news to help you keep current. **Visit www.processor.com today.**

News

Level 3 To Buy Global Crossing

Fiber telecom Level 3 Communications has agreed to acquire Global Crossing, a provider of converged IP services to the enterprise, government agencies, and carriers. The all-stock deal is worth about $3 billion, with Level 3 assuming $1.1 billion of Global Crossing's net debt load. Scheduled to close by the end of the year, the stock-for-stock deal will result in a merged company that will have connections in more than 70 countries in North America, Europe, and Asia. Based on 2010 figures, it will also bring in about $6.3 billion in annual revenues; other benefits of the merger, according to Level 3, are significant synergy opportunities, improved financial strength for both companies, and an expanded global footprint.

Online Fraud Hits Three-Fourths Of SMBs

About 75% of small and medium-sized businesses in the United States experienced online fraud and/or bank account takeover in the past 12 months, according to a study paid for by online banking fraud prevention SaaS provider Guardian Analytics. The Ponemon Institute surveyed 533 SMB owners and executives in the United States and found that banks didn't detect the fraud in 78% of the cases. The businesses lost money in 60% of the incidents, while banks took losses 37% of the time due to reimbursing affected businesses. The overall online fraud rate remained stable year over year despite the rise of tablet and smartphone access to company bank accounts.

Cisco Pays Commil $64 Million In Second Patent Infringement Trial

Cisco will pay $64 million to Commil USA following the decision by a Texas jury that the telecommunications giant infringed on a wireless transmission technology patent owned by Commil that concerns the use of connections between PBXes, mobile units, and base stations to ensure a steady wireless connection. This is the second trial Commil has brought against Cisco concerning this patent; the original trial awarded $3.7 million to Commil, but the decision was thrown out and a retrial ordered after Commil accused Cisco's attorney Otis Carroll of making anti-Semitic comments toward Commil co-owner Jonathan David, who is Jewish, while cross-examining him.

Google & BrightSource Energy Partner For Solar Power Project

Google says it is pouring $168 million into a solar power plant project spearheaded by BrightSource Energy. The project, which is called the Ivanpah Solar Energy Generating System, will produce about 392 megawatts of solar energy over the next 25 years. The three power plants will use a large number of mirrors to generate enough electricity to power 140,000 homes. The U.S. Department of Energy loaned $1.38 billion to BrightSource last year to support the project. The power plant project is a $2.2 billion total investment that should be up and running by 2013.

IT Unemployment Rate Drops

With the addition of several newly created IT job categories used in the 2010 U.S. census, the latest report from the Bureau of Labor Statistics indicates that IT unemployment fell to 4.5% for Q1 2011, down from the 5.3% rate it had averaged the previous eight quarters. The new job categories created include information security analyst, Web developer, computer network architect, and computer network support specialist; in total, there are 12 primarily IT job categories now vs. eight previously. Overall, the bureau's data indicates that there are 3.8 million people employed in IT-related occupations in the United States. That breaks down to 25% software developers, 15% computer and information systems managers, 13% computer support specialists, 12% computer programmers, 11% computer systems analysts, 6% other computer occupations, 6% network and computer systems administrators, 4% Web developers, 4% database administrators, 2% computer network architects, 1% information security analysts, and 0.5% computer and information research scientists.

Global Servers Processed Nearly 10 Zettabytes In 2008

A study conducted by researchers at the University of California in San Diego indicates that global servers processed 9.57 zettabytes of data in 2008, or about 10 million million gigabytes. The total includes 12GB of data daily for an average worker, or about 3TB of data per worker annually. Global companies processed 63TB of data on average annually. The study's estimates were based on an analysis of the total work capacity of the installed base of computer servers in enterprises worldwide. Data from non-computer sources such as telephones and print newspapers wasn't included. Enterprise server information was defined as "the flows of data processed by servers as inputs plus the flows delivered by servers as outputs." According to the researchers, low-end entry-level servers costing $25,000 or less processed two-thirds of the 9.57 zettabytes; the other third was handled by midrange or high-end servers costing more than $25,000. About 44% of all bytes processed were related to transaction processing workloads, while Web services and office applications accounted for the other 56%.

WATCH THE STOCKS

This information provides a quick glimpse of current and historical stock prices and trends for 13 major companies in the technology market.

Company	Symbol	Year Ago	March 31 $	April 14 $	% change from previous issue
AMD	AMD	$10.16	$8.60	$8.19	▼ 4.77%
Apple	AAPL	$248.92	$348.51	$332.42	▼ 4.62%
CA Technologies	CA	$23.06	$24.18	$23.96	▼ 0.91%
Cisco Systems	CSCO	$27.21	$17.15	$17.17	▲ 0.12%
Dell	DELL	$16.86	$14.51	$14.95	▲ 3.03%
Google	GOOG	$595.30	$586.76	$578.51	▼ 1.41%
HP	HPQ	$54.23	$40.97	$40.36	▼ 1.49%
IBM	IBM	$130.89	$163.07	$164.97	▲ 1.17%
Intel	INTC	$24.22	$20.18	$19.58	▼ 2.97%
Microsoft	MSFT	$30.87	$25.39	$25.42	▲ 0.12%
Oracle	ORCL	$26.20	$33.43	$33.80	▲ 1.11%
Red Hat Software	RHT	$31.67	$45.39	$45.49	▲ 0.22%
Symantec	SYMC	$16.98	$18.54	$18.44	▼ 0.54%

NOTE: This information is meant for reference only and should not be used as a basis for buy/sell decisions.

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Need More Incentive TO BEEF UP SECURITY?

Two recent reports shed some light on the state of security in the average enterprise, and not all the news is positive.

Costs Of Data Breaches ARE ON THE RISE . . .

Enterprise data breaches continue to grow more costly, according to the "2010 Annual Study: Cost of a Data Breach" report compiled by Symantec and the Ponemon Institute.

- **$7.2 million**: Average cost of a data breach in 2010 (up 7% from 2009)
- **$214**: Average cost per compromised record (up from $204 in 2009)
- **41%**: Number of breaches caused by negligence, which proved to be the biggest threat last year
- **31%**: Number of cases that involved a malicious or criminal act (up seven points from 2009)
- **63%**: Number of companies that use training and awareness programs after data breaches (encryption was close behind, used by 61% of organizations)

. . . Resulting In An Improved NETWORK SECURITY MARKET

IDC predicts that the network security market will return to pre-recession levels this year. IDC defines the network security market as both hardware and software with security functionality such as VPN, firewall, IPS and IDS, and unified threat management.

- **$8.16 billion**: Expected network security market revenue this year (up from $7.16 billion in 2009)
- **Software**: Expected to grow at a faster rate than hardware, making up just more than 25% of the market by 2014
- **Hardware**: Will generate the most revenue, going from about $6.58 billion this year to $7 billion by 2014

IBM Releases Latest Report On Vulnerability Disclosures

IBM's annual X-Force 2010 Trend and Risk Report found 8,562 vulnerability disclosures for the year, which marks the largest total ever. Nearly half of the vulnerabilities disclosed were Web application issues, and most of the Web application vulnerabilities were the results of cross-site scripting and SQL injection malware. IBM notes that the use of third-party, in-house applications that aren't publicly reported may skew IBM's tally lower than it actually should be. The report suggests that software security teams start with small changes and introduce them gradually so that they will have a minimal disruption onto the existing workflow. This way, the organization can see the value of the effort.

Malware Increases 26% In 2011

A recent report from PandaLabs reveals that the volume of malware increased 26% during the beginning of 2011 compared to the same time period last year and 16% since the end of 2010. According to the report, the average number of new malware detected was 73,190 samples per day, 70% of which were Trojans. The report also showed that some countries have experienced greater malware infection than others—more than half of PC users in China, Thailand, Japan, Latvia, Russia, Turkey, Saudi Arabia, and Brazil contracted some type of malware infection during 2010.

Windows XP Slowly Losing OS Share To Windows 7

Windows 7 has finally surpassed the venerable Windows XP as the No. 1 Windows OS in the United States. As of this month, Win7 held 31.87% of the total OS market, while WinXP dropped to 31.48%. This is a precipitous drop for WinXP over the past year; in March 2010, Windows XP accounted for 43.1% of the OS market. Win7 is steadily on the rise, up from a 13.59% share a year ago. Windows Vista's market share (down to 19.03% from 28.44% a year ago) is dropping at about the same rate as WinXP. The gradual shift to newer operating systems is likely due in large part to the fact that Microsoft will end support for WinXP in 2014.

Motorola, Huawei Settle Dispute

Motorola and wireless product manufacturer Huawei have agreed to settle litigation that had been pending since Huawei filed suit over Motorola's proposed sale of company assets to Nokia Siemens in July 2010. Huawei claimed that the sale would put confidential Huawei company information at risk and filed suit in January to stop the sale. Although terms of the settlement have not been made public, a statement revealed that Huawei will receive a fee from Motorola to allow Motorola to transfer its Huawei contracts to Nokia Siemens. Motorola has resold Huawei products for more than a decade.

Gartner: Android To Dominate Smartphone Market

By the end of this year, Android will be the most popular smartphone operating system worldwide and will account for 49% of the market in 2012. Gartner made the announcement in a recent report covering mobile communications devices and open operating systems. Apple's iOS will remain in the No. 2 spot, with 18.9% of the market next year, followed by RIM with 12.6% and Microsoft with 10.8%. Gartner also predicts that about 468 million smartphones will be sold worldwide this year, up 57.7% from 2010.

MSPs Benefiting From SaaS, Cloud-Based Security

By 2015, SaaS and cloud-based security services will make up about half of the managed security services market, according to new data from Infonetics Research. Last year, revenue in the managed security services market grew 12%, Infonetics reports, and is expected to grow 62% over the next five years. "2010 was a good year for managed security services, which, for the most part, met our expectations for buyer uptake and provider innovations," says Infonetics analyst Jeff Wilson. Infonetics predicts that the overall managed security services market will reach about $17 billion by 2015 and that the Asia Pacific and Central and Latin America regions will account for a growing portion of the market during the next several years.

Report Highlights Correlations Between Multitasking & Memory Lapses

Multitasking, or the act of performing multiple tasks simultaneously, is one of the more appealing capabilities of our PCs and smartphones; however, a new study from PNAS (Proceedings of the National Academy of Sciences) finds that people between the ages of 60 and 80 tend to suffer short-term memory lapses when trying to perform multiple tasks at once, but people in their 20s and 30s don't appear to experience these same lapses when multitasking. The study used a scene interrupted by an image of a person's face and a few questions about the image, followed by more questions about the scene. Older participants had more difficulty recalling particular elements of the scene following the interruption. Although the study didn't use electronic media, the researchers drew parallels between the study methods and our increasingly interruption-filled life with gadgets.

Sweden Tops World Tech Progress Report

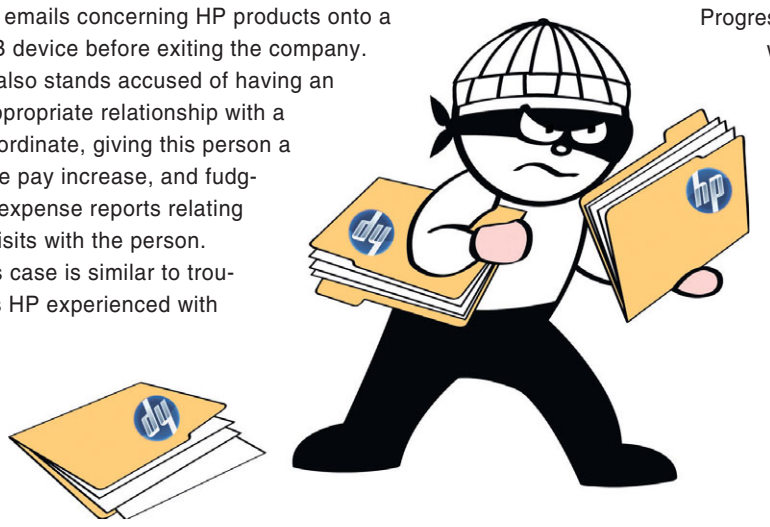
The World Economic Forum reports that the United States ranks fifth among 138 of the world's nations in its use of computing and communications technology. Sweden came out on top, followed by Singapore, Finland, and Switzerland. The survey takes into account 71 economic and social statistics, such as the number of new patents filed, cellular subscriptions, and the amount of available venture capital. The Switzerland-based World Economic Forum maintains that technological progress begets innovation, productivity, and efficiency. The United States had low scores in the rate of mobile phone subscriptions (76th overall), access to low-cost business phone lines (48th), percentage of households with a personal computer (24th), and math and science education (52nd).

Cisco Closes Flip Unit, Lays Off Employees

Cisco announced that it will shut down its Flip video camera division, which sold almost a quarter of all camcorders in the United States last year; as part of the closure, the Flip division's 550 workers will lose their jobs. The move is part of Cisco's plan to leave consumer-oriented lines of business. Cisco CEO John Chambers says the company needs to cut expenses and focus on five key areas: switching and services, core routing, IT architectures, collaboration, and data center products. Cisco bought Flip in 2009 for $590 million, in what some saw as an unusual acquisition for the networking giant.

Former HP Exec Accused Of Stealing Trade Secrets

Adrian Jones, former head of enterprise sales for HP's Asian division, is being sued by HP for stealing trade secrets as he left the company for Oracle. According to the suit, Jones copied privileged documents and emails concerning HP products onto a USB device before exiting the company. He also stands accused of having an inappropriate relationship with a subordinate, giving this person a large pay increase, and fudging expense reports relating to visits with the person. This case is similar to troubles HP experienced with ex-CEO Mark Hurd last year, which involved a similar illicit relationship and the misappropriation of trade secrets.

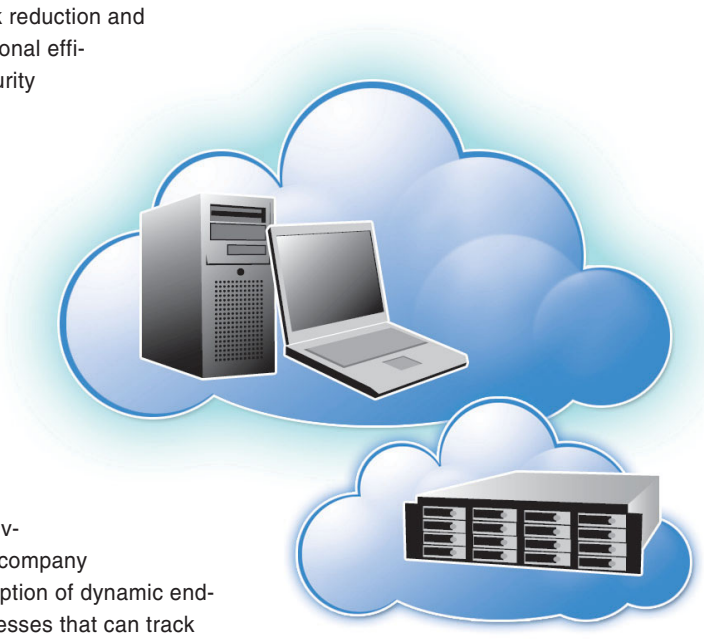


FCC Vote Approves Sharing Of Mobile Networks Across Carriers

The FCC approved a ruling that will ensure cell phone carriers share mobile data networks—allowing smaller telecommunications carriers to use larger companies' networks. The 3-2 vote was divided along party lines, with three Democrats voting for and two Republicans voting against the ruling. Currently the market is dominated by the two largest carriers, AT&T and Verizon Wireless; Verizon is challenging the FCC's authority to make such rulings after last year's net neutrality regulations. Following this new mandate, all carriers must form "reasonable" terms for roaming costs to give competitor's customers access to its network, which was voluntary (and rarely accepted) until now.

Microsoft SDL Progress Report Highlights Security Strategies

Microsoft's Trustworthy Computing division has released its SDL Progress Report, which details and evaluates the company's SDL (security development lifecycle) tools and processes. One of the key findings was that using a holistic development process leads to risk reduction and increased organizational efficiency because security is always evolving. The report also says Microsoft has seen an increase in the number of attacks that are both unique and complex, compared to the traditional stack overflow hacks that were popular several years ago. The company expects that the adoption of dynamic end-to-end security processes that can track the threat environment and automatically adjust will increase in the near future.



Report Looks At Data Breaches At Energy & Utility Companies

A recent report conducted by the Ponemon Institute reveals that 75% of energy and utility companies have experienced at least one data breach in the past year, and that 69% of them believe they will experience another breach in the next 12 months. Previous studies have shown that critical infrastructure providers are becoming an increasing target for online attacks and that those attacks often are politically motivated. Each breach costs an average of $156,000 to clean up, the report states. More than 71% of respondents say that they believe the management team in their organization does not understand or appreciate the value of IT security, and 67% aren't using state-of-the-art technology to protect themselves from attacks.

Most Enterprises Plan Cloud Storage Adoption

A study conducted by Storage Strategies NOW and co-sponsored by the Storage Networking Industry Association found that 57% of CIOs and storage administrators surveyed plan to adopt some form of cloud storage. About 16% plan to implement something within six months, 27% plan to do so within six months to a year, and 17% have plans for cloud storage adoption somewhere between a year and 18 months from now. Another 12% are looking at the 18 months to two-year range, and 22% have already adopted some form of cloud storage. Respondents' reasons for implementation varied, but the desire to store data offsite and to avoid having to build their own storage infrastructure were among the top reasons cited.

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PRODUCT RELEASES

The *Processor* Product Releases section includes brief overviews of data center products.

All products listed have been released recently, so use this section to get up to date with what's new on the market and to find products you need.

Manufacturers:
Do you have a new product that data center/IT managers would be interested in learning about?
Send your press release or product information to press@processor.com.

PHYSICAL INFRASTRUCTURE

Belkin 19-Inch Widescreen Rack Console

Belkin announced the release of its Widescreen Rack Console, a 19-inch rack-mounted appliance with a built-in KVM and power supply that features a slim design and enhanced viewing area, along with easy installation and access. Because no bracket configuration is required and due to a simplified, adjustable rail design, the new product installs quickly, while an easy-to-grip handle, fully integrated keyboard and touchpad, and automatic locks make for ease of use. The high-resolution, ultra-slim, 19-inch widescreen LCD offers a large viewing area, while the overall design is compact, resulting in a lighter appliance.

Cyber Switching ePower iPDUs

Cyber Switching announced single-phase versions of its ePower iPDUs (intelligent power distribution units). The ePower iPDUs exceed all RoHS-6 environmental standards and are designed to lower operational costs and identify energy reduction opportunities. Features include remote management options, support for Cisco EnergyWise, an interactive LCD color touchscreen, power metering and control on each outlet, and IPv4 and IPv6 dual-stack support.

Data Aire Unity Cooling System

Data Aire's new Unity Cooling System combines four components that work together as a hardware and software unit: the fan modules, the server, an airflow measurement device, and the Unity Cooling software inside the DAP III processor that manages the entire system. The system monitors the volume of air necessary to cool servers in computer rooms and adjusts the air on demand. The fan modules can be installed on the top of any cabinet, eliminating the need for floor space, and can be plugged into outlets in the racks. The system's many unique features help enterprises save money on energy and cooling costs. For more on this product, see page 16.

Future Facilities 6SigmaDC 6.1

Future Facilities announced version 6.1 of its 6SigmaDC data center design and operations software. Added features include an enhanced toolset for virtual modeling of electronic components, systems, and data centers; increased import and export options; room scale enhancements; and 6SigmaRoomLite.

Information Support Concepts Economy WC Series 42U Server Racks

Information Support Concepts has launched a new 42U series of server racks, consisting of the 42U Server Rack Cabinet ($799.95) and a secure, four-compartment Co-Lo variant ($1,750), both of which are available with free dock-to-dock shipping.

The 42U 19-inch WC Series server rack cabinet features a usable depth of 36.5 inches, a load capacity of 1,764 pounds, heavy-duty casters, and leveling feet. Designed for enhanced airflow, the WC Series offers a 71% ventilated high-density door and removable side panels, perforated top panel with cable entry access in the rear, and easily removable perforated front and rear locking doors. For more on this product, see page 17.

ITWatchDogs Remote Power Manager X2

ITWatchDogs announced the release of Remote Power Manager X2, which adds remote power monitoring and switching capabilities to ITWatchDogs environment monitors. The add-on presents real-time logging and graphing of voltage, amperage, real power, apparent power, power factor, and kilowatt-hour to provide trend analysis and enables users to set alarm thresholds.

Raritan Smart Rack Products

Raritan recently introduced several new data center products, including environmental and asset management tags and sensors that use ID chips, barcodes, and software to keep track of servers. Also new is the EMX Controller, which is a 1U rackmount environmental management appliance, and sensors for measuring airflow, cooling, and air pressure.

Tate KOLDLOK

Tate entered a partnership with Upsite Technologies to develop an air-sealing grommet for raised access floors. The Tate KOLDLOK is made of injection-molded ABS plastic and measures 8.75 x 11 inches. It provides a better seal than brush-type grommets, Tate says, and has an optional lid capable of supporting up to 250 pounds.

NETWORKING & VPN

AccelOps 3.1

AccelOps announced version 3.1 of its integrated monitoring platform. According to the company, AccelOps 3.1 delivers "role-based access control, the ability to intelligently suppress alerts, and deeper and broader insight into the dynamic virtual environment." The software is aimed at increasing operational visibility and control, improving resource utilization, and facilitating a more service-oriented approach to data center and cloud management.

Aruba Networks AirMesh

Aruba Networks has released an outdoor wireless solutions portfolio called AirMesh. The company states that the AirMesh's Layer-3 routing abilities and quad-radio architecture in the MSR4000 mesh router differentiate it from other outdoor mesh solutions. The portfolio also includes the MST200 single-radio 802.11n mesh router, MSR2000 dual-radio router, MSR1200 dual-radio indoor router, and MeshConfig monitoring and management system.

ATTO Technology FastFrame 10Gbps Ethernet Network Interface Card

ATTO Technology has released its FastFrame 10Gbps Ethernet NIC, which it says is the only PCI-E 2.0 card of its kind that's offered in quad-, dual-, and single-port variants. It's suitable not only for host-to-host networking, ATTO says, but also for Ethernet-based storage thanks to its support for Data Center Bridging. The company builds this card using Intel chip technology to handle high-bandwidth workloads in data centers, media and entertainment environments, and elsewhere. It's ready for HPC cluster usage, video on demand, VoIP, and more, ATTO says. The card should be available by the time you read this.

Avail Now VMware View For iPad

Avail Now announced its VMware View for iPad. This IaaS provides the back end needed to access PCs virtually using an iPad. Using VMware View for iPad, employees can access their computer files via iPads without the company needing to invest in the necessary infrastructure.

Bandspeed AirMaestro RF Monitoring Service & RF Monitoring Console 2.0

Bandspeed released its AirMaestro RF Monitoring Service and RF Monitoring Console 2.0, which it calls a major extension of the company's centralized RF monitoring solution for WLANs. New features include a centralized database of spectral recordings from across the network, automated and event-triggered recordings by remote sensors, and consolidation of correlated interference events in an event database.

BMC Software DB2 10 for z/OS Support

BMC Software announced that 20 of its mainframe service management products now support DB2 10 for z/OS, a strategy that aims to reduce IT costs and increase business availability by offloading some work to zIIP engines. The DB2 10 for zOS solutions are designed to maximize CPU and specialty engine investments, ensure reliable performance, and decrease mainframe downtime.

Brocade ServerIron ADX Series

Brocade announced version 12.3 of the Brocade ServerIron ADX Series software for application delivery switches. Designed to act as a seamless gateway between IPv4 and IPv6 networks, features include a software-optimization approach to double the performance of key application delivery metrics and expanded capabilities of the Brocade Application Resource Broker.

Cisco Data Center Business Advantage Portfolio

Cisco has announced additions and enhancements across its Data Center Business Advantage portfolio. Affected products include the Cisco Nexus 7000 family, Nexus 5000 Series, Cisco Nexus 3000, Cisco MDS storage switches, the Cisco Unified Computing System, the Cisco Data Center Network Manager, and the Cisco NX-OS. The enhancements are designed to create an end-to-end data center fabric and accelerate virtualization.

Citrix NetScaler

Citrix launched enhanced versions of its NetScaler service delivery networking product. The company says that the latest release addresses the "explosive growth in cloud, mobile, and corporate data" by extending the benefits of scalability, availability, and security for the Web tier to the data tier for enterprise IT, cloud, and mobile providers.

EMC Greenplum Data Computing Appliance Line

EMC announced three additions to its EMC Greenplum DCA (Data Computing Appliance) line of products: the High Capacity DCA, the High Performance DCA, and the Data Integration Accelerator. The High Capacity DCA and High Performance DCA help to expand the EMC Greenplum family of fast data warehouse systems that leverage massively parallel processing architecture to enable Big Data to be processed and analyzed fast and at a low cost. The Data Integration Accelerator is an add-on module designed for customers who need to shorten batch loads and implement micro-batch loading, and it leverages a growing catalog of data applications.

Ensim Product Line Expansion

Provisioning and management solution provider Ensim expanded its product line for service providers with Ensim Synergy Service Provider Edition (a complete BSS solution); Connect Service Provider Edition (a User Productivity Portal based on SharePoint); and Unify Service Provider Edition 5.0 (an update for automated user provisioning and infrastructure management OSS).

Fortress Technologies ES2440

Fortress Technologies has released the ES2440, a next-generation quad-radio, secure wireless mesh point that allows for local access and area coverage using the company's FastPath Mesh technology. In addition to offering DoD 8100.2-compliant 802.11i/WPA2, AES, and IPsec FIPS 140-2-certified security that users can upgrade and accredit to NSA Suite B IPsec, the ES2440 is also designed to meet Milspec standards and passed the highest level of environmental testing. The ES2440 is optimized for dynamic mobile communications and bandwidth-intensive applications, including streaming video. The ES2440 can also support WiMAX and cellular radios.

PRODUCT RELEASES

■ FrontRange Solutions Desktop & Server Management 7

FrontRange Solutions released Desktop & Server Management 7, a multiplatform PC Lifecycle Configuration Management solution the company says is designed to let IT automate, regulate, and simplify how desktop systems and servers are managed. Features include 170 wizard script commands, quality assurance release management, and virtualization management support for virtual desktop provisioning methods and hardware virtualization.

■ Net Optics appTap

Net Optics released appTap, an integrated network and application monitoring tap option for remote sites. appTap can provide real-time insight into branch site and satellite office networks to uncover bandwidth, jitter, and other types of problems less expensively than onsite engineering support, the company says.

■ Nimbula Director 1.0

Nimbula announced its flagship product, Nimbula Director 1.0, which is based on Nimbula's Cloud Operating System technology and delivers services akin to Amazon EC2 for both enterprise and service providers. Nimbula Director 1.0 is designed to let customers efficiently manage on- and off-premises resources.

■ Xiotech Corporation ISE Continuous Availability

Xiotech Corporation announced ISE Continuous Availability, which enables nonstop application availability across a metro area and delivers business continuity. ISE Continuous Availability delivers a full active-active, multisite storage infrastructure without added storage software licensing costs, solution complexity or support requirements. It enables full read and write access to the data regardless of which of the two active storage blades are accessed.

■ Symantec System Recovery 2011

Symantec announced its strategy to provide organizations with a tailored approach to solve data, system, and application recovery challenges. As part of its broader downtime remediation strategy, Symantec is also delivering recovery updates and platform support to Symantec System Recovery 2011 for both physical and virtual environments.

STORAGE

■ Aberdeen AberSAN V30 ZFS IP SAN Video Storage System

Aberdeen released the AberSan V30 video storage appliance for the video surveillance market. The appliance is based on Intel's 5600 series Xeon processors and comes with a 48TB maximum native capacity. Pricing is about $600 per terabyte, with a starting price of less than $20,000.

■ Arkeia Software Network Backup 9.0

Arkeia Software released Network Backup 9.0, which includes next-gen Progressive Deduplication technology, as well as two-phase backups for shorter backup windows, agent-side 256-bit AES encryption, and improvements to the Web user interface. Pricing starts at $800 for a perpetual license and $320 for a one-year subscription. The Deduplication Option is priced at $2,000 per media server for a perpetual license and $800 for a yearly subscription.

■ Avere Systems GNS Functionality For FXT Scale-out NAS Appliance Family

Avere Systems announced GNS (global namespace) functionality for the FXT Scale-out NAS Appliance family. The system will allow storage administrators to create and manage file-based resources regardless of their physical location, giving clients running NFS or CIFS a simpler way to access data from a single mount point, the company says.

■ Avere Systems FXT 2550 & 2750

Avere Systems announced two FXT series NAS appliances. Models 2550 and 2750 feature Intel Xeon quad-core processors, more DRAM storage capacity, six 1GbE ports, and dual 10GbE ports with copper or optical options. The units use Avere's GNS capability to manage multiple heterogeneous NAS systems as one.

■ Axxana Phoenix System RP

Axxana announced the Phoenix System RP, which supports Virtual Computing Environment coalition Vblock Infrastructure Packages, including Vblock 1 and Vblock 0. Phoenix System RP is designed to help companies address flexibility, scalability, affordability, reliability, and data protection. Features include synchronous replication over an asynchronous communications infrastructure.

■ Dataram XcelaSAN Model 100

Dataram has released its XcelaSAN Model 100 caching appliance, which the company says will deliver up to 30X improvement in I/O performance. Unlike most solid-state storage solutions, XcelaSAN dynamically caches high I/O activity application data when it is needed, enabling the device to support multiple applications much larger than the cache itself.

■ Intermedia Online Backup

Intermedia has announced its Online Backup service, which is powered by Mozy from EMC. It features a HostPilot Control Panel so companies can monitor their stored data. Intermedia's Online Backup also provides 128-bit SSL data protection. Online Backup runs in the background of each computer so the most current versions of files are always backed up.

■ QNAP Systems TS-x59 Pro II Series

QNAP Systems launched a Turbo NAS family for businesses. The TS-459 Pro II, TS-559 Pro II, and TS-659 Pro II support four, five, and six SATA 6Gbps drives, respectively. Each includes an Intel Atom processor, USB 3.0 and RAID support, and version V3.4 of QNAP's NAS management software.

■ Quantum Corp Scalar i6000 & Scalar i500

Quantum Corp announced high availability and security enhancements to its enterprise Scalar i6000 and midrange Scalar i500 tape libraries. The company plans to add dual robotics and key manager interoperability protocol 1.0 support for encryption to the Scalar i6000 in the

Go to Page 8

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PRODUCT RELEASES

Continued from Page 7

second half of this year in order to supplement the system's existing data path failover support.

■ RackTop Systems Enterprise Backup And Recovery

RackTop Systems and Site2 unveiled their jointly-developed enterprise backup appliance, Enterprise Backup and Recovery. The offering is a hybrid cloud-based platform that runs the Site2 SourceCopy cloud backup service for managing, encrypting, compressing, and deduplicating data, all before sending it to the cloud. The agentless appliance is available with an annual pricing plan.

■ Scality & CTERA Networks

Scality and CTERA Networks announced a partnership to create an integrated offering for distributed enterprises and cloud storage service providers. The partnership ensures customers can rapidly launch scalable cloud-based storage and data protection services with a low total cost of ownership and zero service interruption.

■ StoneFly SCVM & ESS For Windows

StoneFly announced that its SCVM (Storage Concentrator Virtual Machine) and ESS (Enterprise Storage Services) for Windows, the company's Virtual SAN Software Appliances, will come installed on Fusion-io's ioMemory products. These two solutions are designed to help companies manage their servers and storage, whether in local or remote locations, using a virtual machine and the included Hybrid Replication tool. Fusion io's ioMemory products are available in capacities of 160GB up to 1.28TB so, along with StoneFly's ESS and SCVM solutions, users can have storage and virtual monitoring all in one package.

■ Synology RackStation RS2211RP+ NAS

Synology introduced the RackStation rackmount NAS, the RS2211RP+. This server features a 2U form factor and native support for up to 10 bays. By adding an RX1211RP unit, customers can expand the RS2211RP+ to handle up to 22 drives, for a total of up to 66TB of storage. The RS2211RP+ supports read/write speeds of up to 198MBps/166MBps, respectively. The RX1211RP expansion unit interfaces with the RackStation unit via an InfiniBand cable, which supports data rates of up to 12Gbps. Both units feature redundant power supplies to maximize uptime. Other features include support for multiple volumes on RAID and multiple LUNs on RAID. The products will be available late this month, starting at less than $3,000.

■ Unitrends vRecovery

Unitrends released vRecovery, a virtual appliance for VMware that mirrors the functionality of Unitrends' backup, archiving, and disaster recovery solution. It runs on VMware ESX/ESXi vSphere versions 4.1 and later in both licensed and unlicensed scenarios. vRecovery also features broad compatibility, and it can share a Web management interface with Unitrend's Physical Recovery appliances.

SECURITY

■ Accellion Secure Collaboration & Mobile Apps

Accellion announced the Accellion Secure Collaboration and Accellion Mobile Apps, which are designed to allow users to quickly and easily create secure workspaces for internal and external project teams to collaborate and share files. Features include flexibility and scalability, ease of use, mobile access, and regulatory compliance.

■ Codenomicon UVM Lifecycle Model

Codenomicon has released the UVM (Unknown Vulnerability Management) Lifecycle model, a security assurance process that focuses on unreported vulnerabilities. The UVM model secures networks, devices, and applications and utilizes software to protect each component via firewall and VPN. There are four phases that are a part of the Unknown Vulnerability Management process: analyze, test, report, and mitigate. Codenomicon's UVM product uses its Fuzzing technique to discover known and unknown vulnerabilities, and the Defensics Attack Simulation Engine interoperates with the tested system while simultaneously sustaining broad coverage. Defensics can also provide different levels of reports, reproduce vulnerabilities, and verify patches.

■ CREDANT Technologies CREDANT Manager for BitLocker

CREDANT Technologies has released CREDANT Manager for BitLocker, which is part of the soon-to-be-available Enterprise Server 7.1.1. The solution centralizes key management, enhances reporting capabilities, maintains FIPS compliance, automates the TPM initialization, and simplifies policy creation. CREDANT customers are now able to safely deploy BitLocker within the security infrastructure, the company says.

■ Exar BitWackr 2.2

Exar's BitWackr 2.2 security solution for Windows and Linux is designed to provide deduplication and security features for enterprises with cloud-based environments. BitWackr 2.2 also includes Virtual Block Device technology, which allows the solution to be transparent to other applications, OSes, and more.

■ eEye Digital Security Retina Community

eEye Digital Security released Retina Community, a free vulnerability scanner that recognizes vulnerabilities (including zero-day vulnerabilities), configuration issues, and missing patches for OSes, applications, devices, and virtual environments. Retina Community can scan selected sets of IP addresses, identify misconfigurations, and help rectify security and compliance issues. Exporting reports to XML, CSV, and PDF files is supported.

■ FalconGaze SecureTower 2.5

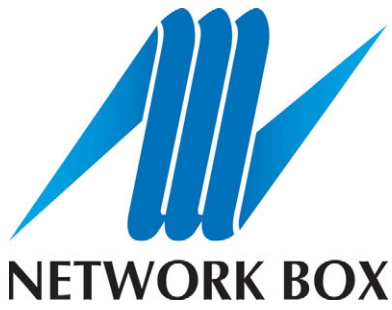
FalconGaze's SecureTower 2.5 adds an extra level of protection to password-protected documents, including Microsoft Word and Excel, as well as PDF and other file formats. SecureTower 2.5 tracks these protected files whether they are being sent or received and can be customized to recognize specific data types.

■ M.A.D. Partners Application Access Control

Mobile Active Defense Partners recently announced enhancements to its Application Access Control solution, which collaborates with RiskIQ to enable enterprises to lower the risk of hostile or malicious apps on their iPhones, iPads, and other mobile devices. The RiskIQ Threat Flow Engine technology operating in M.A.D.'s MECS Server prevents and remediates unauthorized and known hostile apps from reaching the mobile device.

■ Network Box USA Data Leakage Prevention Software

Network Box USA announced the availability of data leakage prevention software to its managed security customers. The offering comes with two engines called DLP_Rules, which can run on inbound and/or outbound data to block sensitive information, and Policy_DLP, which uses a list of directions to enable the use of policy enforcement rules. The DLP offering also includes an advanced rules language. By separating the scanning and enforcement components of the package, the company says, admins can apply highly customized DLP rules on a per-user basis. Using Network Box USA's DLP software, enterprises can prevent sensitive data such as customer info, intellectual property, product roadmap details, credit card numbers, Social Security numbers, document files,



and encrypted ZIPs from accidental or intentional disclosure. For more on this product, see page 29.

MESSAGING & TELEPHONY

■ Alcatel-Lucent OpenTouch

Alcatel-Lucent launched OpenTouch, a suite of communications solutions built on the company's communications platform architecture. The suite uses the company's Genesys SIP Server and OmniPCX Enterprise solutions and provides a converged and open architecture that supports enterprise conversations for multiple devices, parties, and media. The suite includes the OpenTouch Business Edition, OpenTouch Multimedia Services Solution, and OpenTouch Federation Services solution.

■ Alcatel-Lucent OmniTouch 8082 My IC

Alcatel-Lucent also announced the OmniTouch 8082 My IC, a "smart deskphone" that will be available on the Alcatel-Lucent OpenTouch suite of communications platforms as well as the Alcatel-Lucent OmniPCX Enterprise and Office platforms. Designed for the hotel industry, the OmniTouch 8082 My IC provides more powerful tools to manage communications and applications from the desktop and features enterprise reliability, security, high-quality audio, immediate access to a range of employee and customer applications, and a touchpad interface. The OmniTouch 8082 My IC comes in both Basic and Rich packages, which include customized home pages, some guest-controlled functions, and promotional messages and advertising.

■ CounterPath Bria 3.2

CounterPath announced the latest update for its Bria multimedia smartphone. Bria 3.2 integrates multiple contacts and accounts, makes calls in a single click, creates company chat rooms, and includes a ribbon for Microsoft Outlook. A single copy of Bria is available for $49.95, but 3.0 and 3.1 users will receive an automatic update.

SERVERS

■ American Portwell CAR-4010

American Portwell recently announced the availability of its CAR-4010 network security appliance. The CAR-4010 is a 1U, modular rackmount server that can be customized with the customer's choice of a 3.4GHz Intel Xeon E3-1275 processor, a 3.1GHz E3-1225 processor, or a 3.3GHz Intel Core i3-2120 processor. The server supports up to 16GB of dual-channel

DDR3 1333/1066 memory and up to two 3.5- or 2.5-inch SATA HDDs or SSDs. The CAR-4010 also features eight GbE RJ-45 ports or four GbE SFP + 4GbE RJ45 ports, two USB 2.0 ports, a single PCI-E x8 port, and one PCI-E x16 port for use with Portwell's ABN and NIP network interface cards. For more on this product, see page 38.

■ Dell PowerEdge Server Enhancements

Dell added enhancements to its PowerEdge servers, which include the PowerEdge R910, M910, and R810. The R910 features a 10-core Intel Xeon CPU E7-4780 processor and an 18 to 1 server consolidation ratio compared to dual-core systems. Dell is also providing RISC migration workshops, readiness assessments, and other services to improve ROI.

■ NEX Computing Solutions NEX 1U Server For Dealers & Resellers

NEX Computing Solutions' NEX 1U server is designed for dealers and resellers and is ideal for telephony, industrial control, and video input applications. The NEX 1U has a 2.93GHz Core 2 Duo E7500 processor, 2GB of DDR2 PC2-6400 (800) RAM (up to 8GB), and a 1TB SATA hard drive. It can be preloaded with various embedded operating

systems, including Windows XP, 7, and Server 2008. The NEX 1U uses a specialized riser card that accommodates full-length PCI cards so businesses can use their legacy equipment. It also comes with dual Gigabit Ethernet ports and a slimline DVD±RW drive. The NEX 1U starts at $1,295. For more on this product, see page 38.

■ Supermicro SuperServers

Supermicro launched its 5U SuperServer 5086B-TRF for 8-way and 1U 8016B-6F/TF, 2U 8026B-6RF/TRF, 4U 8046B-6RF/TRF for 4-way servers for mission-critical applications. The servers support Intel's 10-Core Xeon E7-8800/4800 processors. The 4-way systems each support up to 1TB of registered ECC DDR3, and the 8-way systems can handle up to 2TB of ECC DDR3. Common features include 6Gbps SATA, 32GB RAM capacity, and 20 PCI-E 2.0 lanes.

CLIENTS

■ Datacard Group CardWizard

Datacard Group released updates of its financial instant issuance applications, including Datacard CardWizard.

PRODUCT RELEASES

The software allows institutions to provide ready-to-use financial cards in minutes. Cardholders leave the branch with a permanent, fully functional, personalized card that is already activated and ready to use, eliminating the delays associated with third-party production, mailing, and later activation.

■ Datacard Group SD360 & CD800

Datacard Group announced the release of two desktop card printers, the SD360 and CD800. The Datacard SD360 features TruePick anti-jam card handling and TrueMatch color matching. Datacard's CD800 is for enterprises that need to print photo ID cards, bar codes, and high-resolution character sets.

■ Eurocom Phantom 4.0

Eurocom released details concerning its "Server on the Go" Phantom 4.0 ($7,999), a dual-CPU notebook that can support up to two server-class processors, six memory slots (48GB RAM total), six storage drives (RAID 0/1/5/10/30), multiple OSes, and virtualization. Server on the Go is described by the company as "a new category of server-class notebook form-factor" system that allows for on-the-go rapid server deployment or ad-hoc capabilities.

■ HP Officejet Printers

HP announced its HP Officejet 100 Mobile Printer that can print 500 pages on one charge and features a 50-sheet paper tray for printing while away from the office. The OfficeJet 100 has a 65-watt AC power adapter that is compatible with select HP notebooks. HP also unveiled its Officejet Pro 8000 Enterprise Printer, which has a 250 to 500 (expandable) paper tray and can print 13ppm black and just over 8ppm color.

■ Lenovo ThinkStation E30

Lenovo announced the ThinkStation E30 workstation, which features a second-generation Intel Core processor, rapid boot up/shut down, and extra productivity features. The system is designed for creative, engineering, and financial professionals who rely on specialized software applications to power their work. Users get workstation-class performance and reliability starting at $599.

■ Minicom Digital Signage ScreenGate Management Gateway

Minicom Digital Signage announced the availability of its ScreenGate Management Gateway, which the company says offers state-of-the-art management capabilities, as well as its ScreenGate IP Streaming solution, which provides streaming media over IP. According to Minicom, ScreenGate Management Gateway maximizes network uptime and minimizes costs. The solution monitors the digital signage network to monitor performance, identify failures, and remediate quickly.

■ Novell Mono for Android

Novell launched Mono for Android, which is a Microsoft .NET application development platform. Now, developers can take advantage of a common code base for creating apps for Android- and iOS-based smartphones and tablets. Mono for Android Enterprise Edition and Professional Edition are priced at $999 and $399, respectively.

■ Novell Vibe Cloud

Novell released the enterprise-centric Novell Vibe Cloud, which is a secure, real-time, Web-based social collaboration service. The offering lets users assemble ad-hoc teams, collaborate across organizations, keep people up-to-date, participate in relevant topics and conversations, and share and synchronize files from the desktop to the cloud.

■ Quest Software Notes Migrator For SharePoint

Quest Software released the latest version of its Notes Migrator for SharePoint, which lets users migrate Lotus Notes, Lotus QuickPlace/Quickr, and Domino. Doc applications to SharePoint and SharePoint Online. Features include Managed Metadata and Document Sets and the ability to convert Notes forms to Microsoft InfoPath list forms.

■ Quest Software Quest Management Xtensions

Quest Software launched its enhanced Quest Management Xtensions, which now features Smart Agent technology that streamlines heterogeneous environment management tasks. With the offering, users can enable agent and/or agentless management using the same code base. Quest Management Extensions also supports Microsoft's Opalis automation platform.

■ Skybot Software Skybot Scheduler 1.6

Skybot Software has released Skybot Scheduler 1.6, the latest version of its Web-based enterprise job scheduler and work load automation solution for Windows, Unix (Solaris, AIX, HP-UX), and Linux servers. Version 1.6 includes Job Flow Diagrams that let users place jobs and events with dependencies and similar functions into a graphical layout to help them understand their schedule.

■ SunGard Asset Arena

SunGard released an enhanced version of its Asset Arena solution suite, which lets asset managers, institutional investors, and traditional and alternative fund administrators shorten investment accounting cycles and reduce operating costs. The suite supports improved transaction processing speed (by up to 85%) and lets users process up to seven times as much business in the same timeframe.

■ VBrick Systems Rich Media Desktop

VBrick Systems' Rich Media Desktop, or RMD, allows users to take audio, video, and photos and combine them to create presentations. RMD features transitions, titles, and more and supports streaming for QuickTime, Windows Media Player, Flash, and mobile devices.

SERVICES

■ IBM SmartCloud

IBM announced its new SmartCloud series of services and software for private, public, and hybrid clouds. SmartCloud features deployment and management as well as security, availability, and performance tools. It also includes the IBM Workload Deployer so users can manage middleware and software applications from one central client.

Ad-Hoc Approaches To Green IT Prove Inefficient:
A Well-Defined Strategy Is The Key To Success

BY ROD SCHER

Is your organization's approach to green IT really a strategic initiative? Or is it more of a piecemeal, ad-hoc approach in which various departments do their bit to help the company work more efficiently in the name of sustainability? If your company is like most, it's the latter.

"Organizations often approach energy efficiency the same way we might approach fuel efficiency for our cars," says Frank Trovato, a research analyst for Info-Tech Research Group. "They take notice only when prices go up. This start-and-stop approach is preventing green IT from gaining traction at a time when those cost savings could help companies through a difficult economic recovery. For example, in 2008, when energy prices were skyrocketing, you couldn't give away your pickup truck, and green IT was a hot topic. Today, pickups are back to being best sellers, and green initiatives have stalled for many organizations."

The greening of IT is a complex undertaking that can involve many stakeholders, and it often devolves into tech-laden conversations about air chilling, wattage, virtualization, and the like. But a recent Info-Tech presentation, "Take A Strategic Approach to Maximize the Benefits of Green IT," boils it down to language that C-level execs can appreciate: "An ad-hoc approach is leaving money on the table." And we all know that leaving money on the table is a bad thing.

The Forest For The Trees

One of the ways enterprises go wrong is by focusing on the little things—a lot of them, including low-hanging fruit such as printer consolidation, for example. There's nothing wrong (and much that's right) with printer consolidation, of course. But it's unwise to enjoy the immediate cost savings and then stop there, happy with what we've achieved. For example, Trovato says, "We focus on things like energy savings 'by accident'—such as through server virtualization, something typically done for non-green-IT reasons—but ignore cooling efficiency. Server virtualization increases cooling demands, so it can actually result in higher energy costs if cooling efficiency is poor."

Another typical blunder is not measuring energy usage. If there's no measurement, then there's no management, as the saying goes. If you have no baselines and nothing to which you could compare the baselines if you did have them, then you lack the data you need in order to make a business case for green IT initiatives. You also lack any proof of cost savings that might serve to justify future initiatives. You've accomplished some

immediate (and undoubtedly important) savings, but at the cost of future, more strategic investments.

A Strategic Approach

In contrast, a precisely articulated green strategy is a long-term approach to sustainability that involves all of the stakeholders and taps into the corporate culture in the hopes that green IT will become a part of that culture.

"A well-defined green strategy includes activities such as measuring energy usage to identify where you can make the biggest gains and tracking progress to fuel ongoing initiatives," Trovato says. "Organizations that integrate a comprehensive green strategy into the corporate culture are better able to sustain that strategy, particularly during difficult economic times when the cost benefits of green IT are even more important."

Because they're in it for the long haul, organizations that take the strategic approach can also benefit from initiatives that have a longer ROI period, such as improving standby power and cooling efficiency, and they can benefit from incentive/rebate programs.

In the end, we owe it to our companies and our communities to take a long-term strategic approach to green IT. As noted in a recent International Facility Management Association report ("Turning Data Centers Green," 2010), sustainability is nothing more—or less—than the business implementation of environmental responsibility. P

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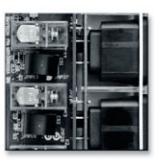

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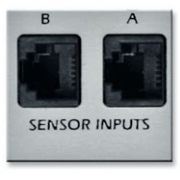

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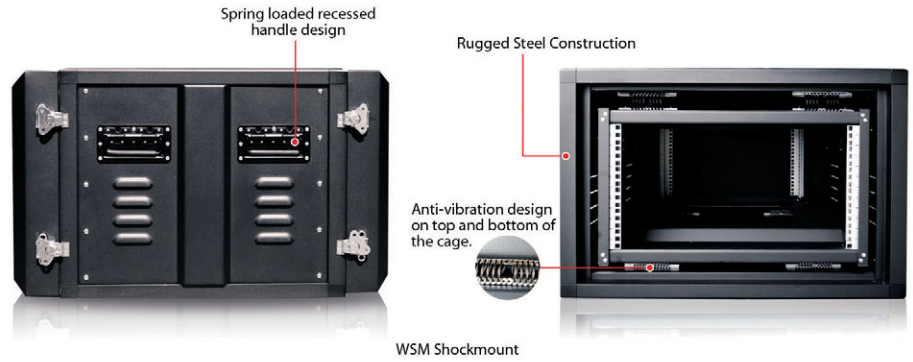

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News

Open Networking Foundation Supports A New Way To Network

The newly formed Open Networking Foundation combines the ingenuity of the world's top tech companies and the brainpower of two esteemed universities to create a new approach to networking. ONF is a nonprofit organization formed by six companies—Facebook, Google, Deutsche Telekom, Microsoft, Verizon, and Yahoo!—and is now supported by 17 additional members, including HP, IBM, Cisco, Dell, NEC, and VMware. These companies are supporting what they call rapid innovation in Internet architecture through a change in software called SDN, or Software-Defined Networking.

Stanford University and the University of California at Berkeley collaborated to develop SDN. According to Stanford professor and Open Networking Foundation Board member Nick McKeown, SDN lets owners and operators of networks control and manage networks to serve their (and their customer's) needs in an optimal way. The two basic components of SDN include the OpenFlow software interface, which controls the forwarding of packets through network switches, and a set of global management interfaces, which allows for more advanced management tools.

What To Expect

According to the foundation, SDN would change networks in data centers, wide area telecommunication networks, wireless networks, enterprises, and even homes. Many benefits would be evident in applications. "When popular events go viral and cause localized surges of sudden traffic, SDN can redistribute network capacity and routes for specific data flows to maximize traffic handling and minimize delays and packet loss," McKeown says.

McKeown says that SDN would also be able to detect DoS attacks and minimize or thwart them before they do any damage. "One could also imagine SDN being used for outsourced management of home networks," he says. ONF cites reduced energy usage and better control over the network as other potential benefits of the software changes.

"ONF believes firmly in the potential of SDN to increase network functionality and efficiency across the industry," McKeown says. "SDN allows the network to evolve and improve, building upon—and ensuring compatibility with—existing systems. It also carries the potential to help any networking technology provider operate in a more efficient and competitive manner."

Whether SDN and OpenFlow receive mass market approval has yet to be determined; however, McKeown says he is pleased with the response thus far. "A few member companies have announced OpenFlow-enabled products, and we anticipate more will be announced in the next 12 months."

by Antona Beckman

PHYSICAL INFRASTRUCTURE

Grounding & Surge Protection Issues

Tips To Avoid Power-Related Downtime

by Dan Heilman

• • •

Almost every computer owner understands that it's important to have his PC plugged into a surge protector—even if he doesn't necessarily understand why. For the people who operate data centers, surge protection and other power-related precautions aren't just wise, they're essential.

"If a surge takes down your desktop computer, you've lost a $1,000 computer," says Kenneth Jackson, data center engineer for the city of Austin, Texas. "If a surge takes down a server, that could mean the loss of a $50,000 server—and more important, the data on it."

A potentially fried server, or the crippling of an entire data center, is the obvious worst-case scenario surrounding a power catastrophe. But even small interruptions can be counterproductive and costly, according to Eric Hu, designer and engineer for ZuniDigital (www.zunidigital.com).

"Downtime will be more frequent if these issues aren't addressed," says Hu. "Your circuit breaker is going to jump if there's a surge."

The standard downtime for a data center that does Web hosting is 0.005%. That percentage can jump if equipment isn't grounded and there isn't proper diversion of the current in the ground, says Hu. "A fuse will pop and the power supply will be inoperable unless you hook up to raw power without grounding, which is usually a bad idea."

How do you keep that from happening? It all starts in how the data center is constructed. Most data centers address grounding issues up front by installing raised, 24- x 24-inch floor tiles with a stringer system that provides high-frequency conduction of power. "From posts at the corner of the stringer systems, you run a copper gridline underneath the raised floor, and you ground maybe every fourth post in this copper gridline to try to alleviate any static in the air or difference in potential," Jackson explains.

Most data centers also come with a transient voltage surge suppressor at the switchgear level that protects from lightning strikes, as well as a separate grounding setup to prevent surges or spikes from the internal environment.

Jackson says that sort of setup is in place in most legacy data centers but not always in newer ones. "Newer data centers don't have that raised floor," he says. "They're built on the concrete deck, so there's no underfloor grounding grid. . . .You have to run grounding line overhead and have it connected to every single rack—something with zero potential so you can bleed off any static that builds up."

One Day At A Time

Power issues aren't all resolved during the construction phase of a data center, however. Some of the most important precautions that can be taken are everyday, ongoing ones.

One of those is to simply be aware that certain times of day and times of year can leave data centers more exposed to surges and spikes. "When you're operating a data center, you're dealing with sensitive equipment that's more susceptible to ebbs and flows of a standard power grid, especially in larger metro areas," says Phillip Koblence, vice president of operations for NYI (www.nyi.net). "Those systems routinely experience power surges and dips, usually near the start of business and when people shut down in the afternoon. Problems are also more prevalent during summer when there's more stress on the grid."

> "The worst case is a power dip that makes a bank of servers just die. But more often, it's a gradual deterioration."
>
> *-NYI's Phillip Koblence*

Data center staff should also be aware that the consequences of surges and grounding issues aren't always as dramatic as the complete failure of a server. Koblence says that sometimes the effects can be much more gradual but just as dangerous.

"More often, you'll have issues with the moving parts within servers. Hard drives will begin to go bad more regularly and large-scale data storage units like SANs will have a higher failure rate than they would with fewer power fluctuations," Koblence says. "The worst case is a power dip that makes a bank of servers just die. But more often, it's a gradual deterioration."

Crucial Practices

Some of the best practices for avoiding power-related disasters within a data center involve common sense. For instance, you don't want to allow food or drinks near data center components. Koblence also recommends having appropriately sized UPSes in place that can take the hit from a voltage drop or brownout. Also, be sure to ground each cabinet individually and require that technicians wear static-resistant wrist straps that are connected to grounding equipment.

Jackson suggests having a data center operations manual that explicitly outlines how and when staff can handle and maintain equipment. "Don't let people work on servers during normal working hours without the data center manager's sign-off," he says. "A power mishap is far more likely in a scenario like that."

Also, bear in mind that even though many newer servers come with power supplies that have some built-in surge suppression, that doesn't mean extra measures shouldn't be taken. "Precautions are starting to be built into power supplies," says Jackson. "But don't take that to mean you don't have to alleviate surges beyond that, because you do."

Finally, keep in mind that most data centers are built to be scalable and expandable, and that goes for their capabilities in dealing with power issues, according to Mark Engler, president and engineer at ZuniDigital. "Have any expansion plan include the grounding and surge protection, because surge protection only works if there's a proper ground," he says. "It can be retrofitted. When the electrician sets up the electrical system for the data center, make sure he's running the proper ground lines that can be expanded. That means using the proper diameter wire that can handle surges." P

Key Points

- Data centers should be built with grounding systems that you can expand and revise in the future.
- Surges and brownouts can slowly deteriorate the performance of hard drives and other equipment.
- Don't overlook human error and best practices when enforcing data center power policies.

Grounding Systems

An oft-overlooked fact about grounding systems in data centers relies on an old cliché: They are only as strong as their weakest link. Martin Ramirez of Rackmount Solutions (www.rackmountsolutions.net) offers this list of essential ingredients in a grounding system:

- It should be visually verifiable
- It should be adequately sized
- It should direct damaging currents away from equipment
- All metallic components in the data center should be bonded to the grounding system
- All grounding conductors should be copper
- Components should be listed by an approved test lab such as UL
- And it must adhere to local electrical codes

"There should be a logical flow as you follow the grounding structure," Ramirez says. "For example, from the equipment chassis to the rack, from the rack to the data center grounding infrastructure—until you get to the earth ground."

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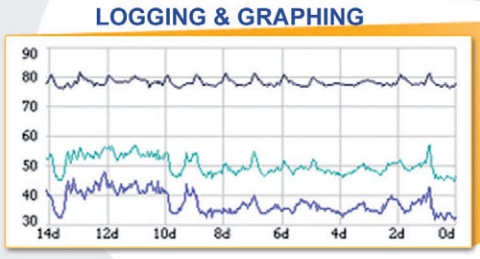

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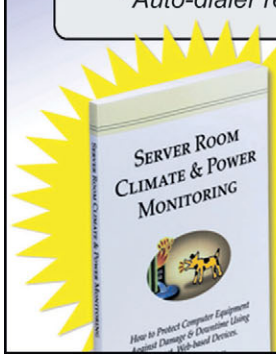

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News

IT Has Too Many Apps To Manage

It seems many companies both within the United States and worldwide are burdened with excess applications, causing them to spend valuable IT resources on obsolete systems rather than focusing on growth for their companies as a whole.

HP and Capgemini surveyed nearly 100 companies of all sizes in Europe and North America regarding the applications they are now using. What they found was that about half of the large company (5,000 to 10,000 employees) and over half of the enterprise company respondents feel that their IT organizations are maintaining more applications than necessary. Small and medium-sized organizations (1,000 to 5,000 employees) feel they have about the right amount of applications, but note that any applications that are unnecessary can negatively impact their ability to both maintain their business and innovate.

Application Glut

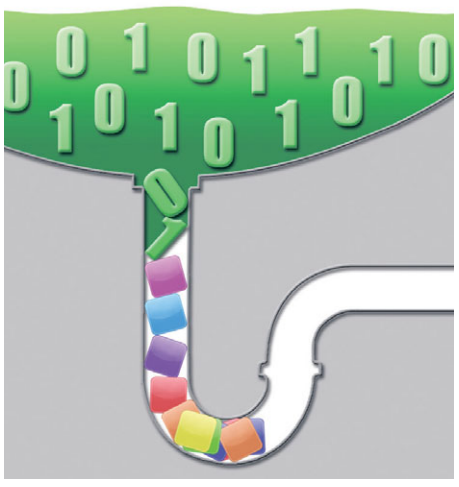
According to survey respondents, this application glut arose for a number of reasons: mergers and acquisitions resulted in a number of redundant applications in the new companies; custom legacy applications are becoming obsolete and difficult to integrate into the new IT infrastructure; companies continue to support applications that provide little value to the business and don't follow current business processes; and many organizations are reluctant to archive application data for fear of violating industry or government retention requirements.

Some of this negativity has its roots in education, says Murat Aksu, global head of HP software alliance at Capgemini. University computer science programs, he says, don't talk about application retirement, and when these students reach the IT leadership level, retirement of applications is not in their "collective psyche," Aksu says. They seem to be unaware of the cost of maintaining too many applications.

The survey points to several barriers to application retirement. First is the cost. Companies are more accustomed to maintaining the status quo than retiring existing applications. Also, because ROI is usually more than six months out, many firms are unwilling to put the money into it. Company culture and behavior can also be a problem because employees are often unwilling to change, and different subsidiaries or groups many times have different feelings about application retirement. Custom-designed systems pose a problem when employees leave the company and take their knowledge with them. And finally, retirement is simply not seen as a priority by some firms.

In spite of the enormity of the situation, there are answers, Aksu says. Among other things, companies should regularly assess their applications portfolio, consider retirement as a basic element of the business cycle, and get buy-in from the internal business stakeholders, which will give the whole process the support it needs.

by Patrick Kean



PHYSICAL INFRASTRUCTURE

SIX QUICK TIPS

Extending Your Data Center's Life Span

How To Squeeze More Mileage Out Of Your Equipment

by Bruce Gain

• • •

Extending the life span of your data center is a lot like good car maintenance. The idea is to squeeze as much mileage as you can out of your car so that it can be driven the way you need it for as long as possible. To do that, you must change the oil, filters, spark plugs, and other parts after a certain number of miles. Selecting the right replacement parts during the life cycle of the car is important, as well.

The same type of thinking can be applied to squeezing the most life out of your data center. Here are some tips on how to get the most out of your IT spending by prolonging the life span of your data center's equipment and infrastructure.

Look At Infrastructure & Design

An effective way to go about analyzing how to extend the life of your data center is to break down the equipment and infrastructure into two separate categories, says Steven Harris, director of data center engineering for Forsythe Data Center Solutions (www.datacentersolutions.com).

Category A applies to the useful life of the data center's building infrastructure, which includes the generators, UPS units, CRACs, and other related equipment, Harris says. "For prolonging the useful life of the data center's building systems, preventative maintenance and upkeep are key," he says. "Different building systems and components require maintenance at different intervals, typically ranging from quarterly to semi-annual to annual. Monitoring should increase as the age of the building technology increases."

Category B applies to the useful life of the data center's floor plan and design, which include floor space, power, cooling, and communication demands, Harris says. "[The data center's floor plan and design] changes over time," he says. "Consolidation, optimization, and virtualization are all keys to making do with the environment you have."

Don't Mix High- & Low-Performance Servers

Many small to medium-sized businesses rely on server technologies as a key part of their business offerings. An SME, for example, might have a group of core servers with the latest top-performance CPUs to boost efficiencies of key tasks, such as order processing or real-time inventory management. High-performance servers also sit at the high end of the cost scale for cooling, power, and infrastructure requirements, and building a new data center to accommodate growth for these kinds of servers represents huge capital expenditures.

One way to extend the life span of data center sites that house core-performance servers without having to invest millions of dollars to build a new server room is to use a tier system, says Brad Kowal, assistant data center director for Shands HealthCare in Florida. "Work to free up your highest-tier room or facility from lower-tier systems that are using space, power, and cooling and not providing core services for the business," Kowal says. "Perform an inventory of your systems and ask whether it really needs to be in the best-tiered data center. If not, move it and let the organization's leadership know you have saved them from investing millions in a new data center."

Keep It Clean

Prolonging the life span of data center equipment involves proper cleaning. "Data center cleaning can help increase the life of equipment by making sure that contamination does not build up inside the machine that could cause problems with server heads," says Kevin Vickery, president of ProSource Mission Critical Services (www.team-prosource.com). "Also, regularly cleaning the raised floor can help extend the life of the [anti-static] properties of the floor tiles' surface. This helps ensure that electrostatic discharges are not an issue."

But if you want to make your equipment last as long as possible by properly cleaning the data center, it is critical to keep in mind that experienced professional cleaners almost exclusively have the know-how to use the right materials and practices so as not to damage delicate data room equipment. "It is important to make sure that any chemicals and equipment used in cleaning the data center is approved for the data center's sensitive environment," Vickery says.

Insist On Quality

The temptation to save money by spending as little as possible on cheaper and inferior equipment might save money initially, yet not spending enough on quality parts will increase the risk of malfunctions and equipment breakdowns in the long term. "Trying to save money by buying the cheapest possible equipment will come back to bite you," says Josh Whitney, vice president of product management and development for Black Box Network Services (www.blackbox.com). "Buying insufficient or low-quality equipment is a sure way to increase costs in the long run. In fact, because demands on networks are increasing all the time, it's wise to go in the opposite direction and invest in more infrastructure than you need at the moment and grow into it."

It is essential to buy from reliable sources to make sure that equipment meets your quality standards and is not a counterfeit product, instead of always choosing the cheapest available option, Whitney says. "[For example], bargain-priced CAT 6 cable may not be up to CAT 6 standards, resulting in recabling," Whitney says. "The fact is, as much as 20% of the cable for sale in today's market is unsafe, non-approved, or counterfeit." P

Most Practical Tip:

Rely On TIA-942 Standards

With data center build budgets in the tens of millions of dollars, extending data centers' life spans by building them to last as long as possible is essential. A way to help future-proof data center builds is by following the Telecommunications Industry Association's TIA-942 standard for network architecture, system redundancy, security, file backup, hosting, power management, and other elements, says Josh Whitney, vice president of product management and development for Black Box Network Services (www.blackbox.com).

"Non-standard construction may mean your data center has to be modified or upgraded much sooner, leading to unexpected and unbudgeted costs," Whitney says. "TIA-942 helps to ensure consistency and produces networks with high reliability, expandability, and scalability."

Best Tip:

Don't Skimp On Cabinet Quality

Cabinet builds are an important yet often neglected part of data center builds. Flimsy or undersized cabinets are bad for the equipment that is inside and connected to them, Whitney says. Investing in quality cabinets can thus help to increase the life span of servers and other equipment connected to the racks. "Too few cabinets or cabinets that are too small or flimsy inevitably result in overcrowded equipment and overheating, causing equipment to be damaged," Whitney says. "Cheap cabinets often must be assembled by the user and won't withstand heavy equipment loads."

BONUS TIPS

- **Get the power management and cooling right.** Optimizing cooling systems offers direct benefits when trying to extend the life of the data center, says Josh Whitney, vice president of product management and development for Black Box Network Services (www.blackbox.com). In addition to efficient hot aisle/cold aisle layouts, power-management tools can help boost the life spans of data center equipment, he says.
- **Get more mileage out of peripherals.** One way to slash the number of peripherals your enterprise has to replace is to use a single keyboard, mouse, and monitor to manage multiple servers and workstations with KVM technology, Whitney says. With KVM, a single keyboard, mouse, and monitor can control several servers or workstations at once.

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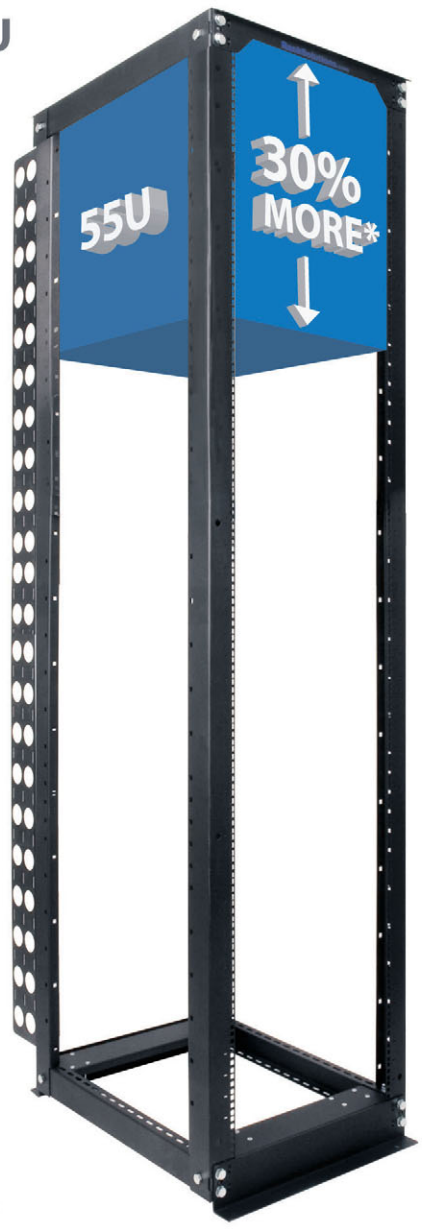

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- Uses the same square footage

*while giving you 30% more space than a 42U model

For more info on this product, see **www.racksolutions.com/rack**

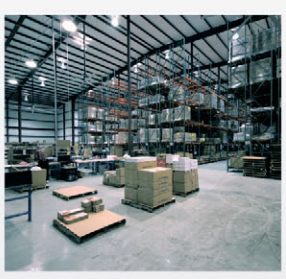
Rack heights 24U - 55U
- Universal square holes, cage nuts included
- Streamlined support for power strips, PDUs

New & improved design
- 24" width is perfect for data centers
- Flush floor mount spreads load on floor tiles

Rack accessories
- Rack tops, caster kits, side panels & power strips may be purchased separately

We Design
At RackSolutions, we pride ourselves on being an engineering driven company. With over a decade serving the data center market, we've developed product solutions for every major OEM. Better yet, our top notch staff of mechanical and electrical engineers are available to solve your toughest custom data center installation design challenges. Our customers like the fact that we often provide a first article prototype before competitors have even supplied a quote.

We Build
In order to meet our exacting production standards and rapid prototyping needs, we opened our own metal fabrication plant in 2005. Our engineers thrive on the fact that they can create a design in the morning and see a prototype from our own plant later the same day. We fabricate products from steel, galvanneal, aluminum, Lexan and other flat sheet plastic materials. Our quality control process ensures we deliver only products that have met our own rigorous standards.



We Ship
Our 40,000 square foot warehouse, the centerpiece of our distribution capability, is located on our 13 acre campus together with our corporate office and manufacturing plant just outside of Dallas in Greenville, Texas. With complete pick, pack and ship capability, we process hundreds of parcel and freight orders daily. Our products are also available through Ingram Micro, the world's largest technology distributor and a leading technology sales, marketing and logistics company.

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HOT TIPS FROM MOVINCOOL CUSTOMERS:

A COST-EFFECTIVE COOLING SOLUTION IS JUST WHAT THE DOCTOR ORDERED.

Matt Steding, Allina Medical Clinic's Maintenance Manager

When a "mission critical" data room became a "hot spot" after several upgrades, Matt Steding kept his cool. "The extreme weather puts an extra load on external compressors and condensers — which increases maintenance costs." Which is why he chose the more innovative, cost-effective solution: MovinCool's self-contained, ceiling-mounted CM25 air conditioner.

In addition to MovinCool's reputation for performance and reliability, Steding was impressed by the CM25's high sensible cooling capacity of 18,900 Btu/h, its seasonal energy efficiency ratio (SEER) of 14 and its compact dimensions. Sitting just 20 inches high, it easily fit into the ceiling space above the data room. "The CM25 has all the features we need — plus an affordable price."

To read more about Matt's MovinCool success, visit: www.movincool.com/allina

Get a $300 rebate gift card with every CM25*.

* Limited-time offer. Visit www.movincool.com/rebate for details.

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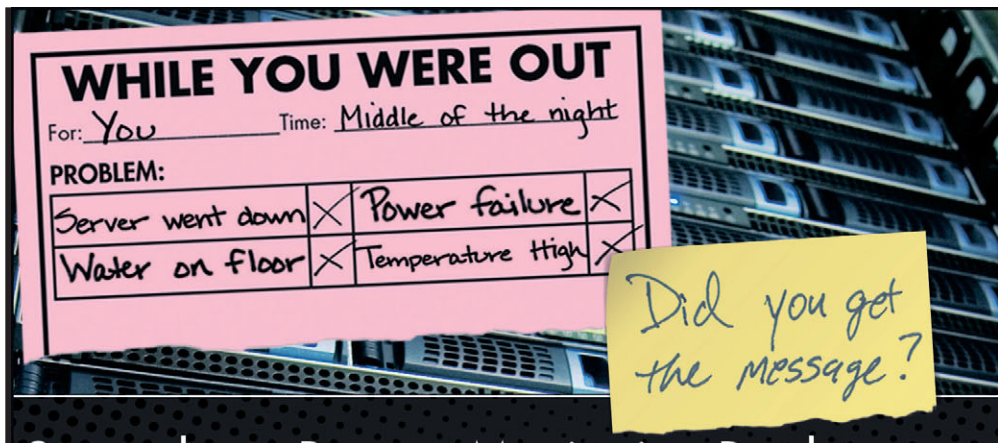

Sensaphone Remote Monitoring Products use *redundant communication paths, built in battery backup,* and *supervised sensors* to make sure that when something goes wrong in your computer room

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by Joanna Clay

Finally, Data Center Cooling That Saves Money

NEW ENERGY-EFFICIENT servers and other equipment can have a dramatic impact on data center cooling requirements, and those requirements can fluctuate. In such situations, wouldn't it be great to have a solution that would adequately cool servers based on need and reduce operating costs at the same time?

Data Aire's new Unity Cooling System does those things while also conserving floor real estate, lowering capital expenditure spent on installing cooling products, and bypassing the use of additional refrigerant piping or separate chillers.

Four Components Working Together

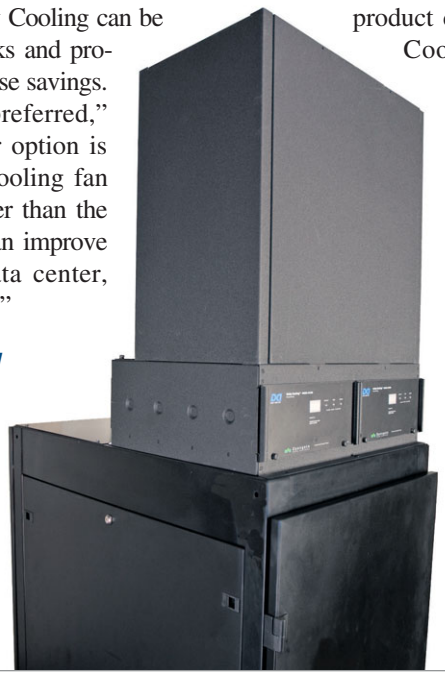
John Martin, marketing manager for Data Aire, says the Data Aire Unity Cooling System goes above and beyond auxiliary cooling systems such as in-row cooling and overhead cooling, which only provide cool air in a specific vicinity.

The Unity Cooling System has four components that work together as a hardware and software unit: the fan modules, the server, an airflow measurement device, and the Unity Cooling software inside the DAP III processor that manages the entire system. The fans within the fan module change speed depending on the server rack exhaust output. The Unity Cooling System's server then processes the volume of air exhausted, summarizing the fan module data. The Unity Cooling software receives the report and works in conjunction with the DAP III Zone Master card to instruct the computer room air conditioner to adjust the air supply to the data center.

"The Unity Cooling concept works with either an entire data center or partial containment. If a data center has a high-density area, Unity Cooling can be used only on these racks and provide an operating expense savings. Full containment is preferred," says Martin. "Another option is installing the Unity Cooling fan modules on racks rather than the entire system—these can improve airflow within the data center, resulting in cost savings."

Installation Flexibility

Martin says that the fan modules mount on top of any cabinet, eliminating the need for floor space in the data center. "Fan modules only require electricity and can be plugged into outlets in the racks. Depending on the heat load of the rack, a single fan module set can handle multiple racks," Martin says. And the fan modules are scalable, Martin says, so you can increase the heat load in the rack and, if necessary, just swap out fan modules. The comprehensive Unity Cooling software lets admins monitor efficiency status reports, historical trending, power capacity, and remote humidity sensors.



"No other manufacturer offers a product concept similar to Unity Cooling," Martin says. "It is unique. The capital expenditure to install the Unity Cooling concept is considerably less than other auxiliary cooling systems."

Save On Energy, Cooling Costs

The Unity Cooling system isn't an energy hog. In fact, the most important feature of the Unity Cooling System is that it can reduce the energy required to maintain proper cooling in the data center, Martin says.

Data Aire Unity Cooling System
Combines fan modules, a server, an airflow measurement device, and the Unity Cooling software to boost data center cooling while reducing energy consumption.

The system captures hot air from the rack, eliminating the mixing of hot and cold air. The active chimneys, assisted by efficient dynamic fans, draw hot air from the server rack and confine the hot air. This separates the hot air from the mainstream, resulting in energy savings. Data center admins are also able to increase the supply air temperature from the CRACs, saving cooling costs and resulting in more hours of free cooling. Plus, these dynamic fans operate only when required, saving additional money.

With today's data centers typically oversupplied with conditioned air, perhaps the best money-saving feature of all is the Unity Cooling System's ability to match the amount of air supplied to the space by the CRACs, resulting in reduced operational expenses for the overall cooling system. P

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PHYSICAL INFRASTRUCTURE

CS-6HD/HY 50/60A 3Ph 6xL6-30R

Introducing the unique 50/60A three-phase Smart CDU designed especially for Cisco Nexus 7000s.
- A NEMA locking outlet solution for high-density applications
- Reliable three-phase power distribution
- Local and remote power monitoring and environmental monitoring via IP
- Link to an expansion unit for more outlet

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PHYSICAL INFRASTRUCTURE

Sentry Power Manager (SPM)

SPM is a 1U appliance and software package capable of monitoring and managing multiple PDUs in IP-based enterprise networks.
- Global view of power
- Temperature monitoring
- Trending, graphing, and reporting
- Manage outlets globally
- Group outlets or branches
- Database to store information
- Auto-discover PDUs

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PHYSICAL INFRASTRUCTURE

Per-Outlet-Power-Sensing (POPS) CDU

Power Information Per Outlet Includes:
- Current load (A)
- Voltage (V)
- Power (kW)
- Apparent power (VA)
- Crest factor
- Power factor

This information can be used to calculate the PUE and DCiE from The Green Grid, which in turn will allow data center managers to make informed intelligent decisions about their facilities.

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Buying Tips:

Power Distribution Units

by Tessa Warner Breneman & Corey Russman

• • •

Although they are seemingly simple tools, PDUs have a lot riding on them. Here are tips for what to look for:

Evaluate your needs prior to shopping. Consider how many outlets you need to connect all your devices and how many amps the PDU needs to support. "The biggest key is that [buyers] do their homework and find out what they really need," says Tim Derochie, director of product management at CyberPower Systems (www.cyberpowersystems.com).

Brandon Siri, senior marketing representative at Server Technology (www.servertech.com), agrees, saying buyers often don't do enough research and end up purchasing a PDU that doesn't fulfill all their needs. "Internet browser shopping is a good start," Siri says, "but it's critical to consult an expert and be aware of the options out there."

Know your options. Buyers will have to choose between basic, metered, and switched PDUs, say Derochie and Siri. "Intelligent rack-level PDUs are more than just common power strips," Siri says. Basic PDUs offer simple power distribution and branch circuit protection to your most critical devices. Metered PDUs take the next step and have an onboard LED that displays the amps being drawn by devices, Siri says. Intelligent Switched PDUs connect to the network and offer remote management. With a switched PDU, you can reboot the system remotely and control outlets individually from the Web.

Shop for a solution. Look for a solution first, features second, Siri says. "Start by asking yourself and your team, 'What are we trying to accomplish?'" Siri says. Consider factors such as whether you want to cycle your server power remotely; monitor your power over the network or on the data center floor; and know your power draw at the rack, branch circuit, or outlet level, Siri says. "Once you know your goals, the features will come second," he says.

Buyers' Checklist

- ☑ **Have an understanding of what you need to accomplish.** Be sure you know how many components you need to plug into the PDU and whether you need a basic, metered, or switched PDU.
- ☑ **Know your numbers.** Determine how much power you're going to draw and that you have the right voltage and amperage numbers.
- ☑ **Find your plug types.** Match the plugs from your devices with the PDU's plug type.
- ☑ **Figure out the PDU location.** Verify where your PDU will be located in the data center and what type of rack you have to determine how your PDU needs to be mounted. Also be sure to measure the distance from your PDU to the power source so you'll know how long your PDU cord needs to be.

Key Terms

ATS (Auto Transfer Switch). Offers a primary and secondary input cord. With the ATS capabilities, network administrators can get dual redundant power from two UPS systems or power sources to network devices with a single cord. ATSes come in metered and switched formats.

Basic PDU. Provides simple power distribution and has few other capabilities. Basic PDUs are generally able to provide branch circuit protection and several outlets to connect devices in the rack enclosure.

Dual Circuit PDU. Offers two input cords to support servers and network equipment with dual redundant inputs to create a fault-tolerant rack installation with power from two UPSes or building circuits supported by generators. Dual circuit PDUs come in basic and metered formats.

Metered PDU. Monitors the amps flowing through a PDU so network administrators can be sure the amperage coming from the connected devices does not exceed the capacity the PDU is designed to handle.

Switched PDU. Offers the benefits of a metered and basic PDU, along with the ability to remotely manage the load through a network connection. Through the network connection, administrators are able to switch PDUs and individual outlets on or off and reboot the system if necessary.

Four vibrant colors. Get rid of the confusing "black power cord mess" inside your server cabinet. Now you can use specific colors to identify critical devices with and without redundant power. Cords are available in green, yellow, red, and blue, with custom colors also available.

Eliminate the slack. We offer our power cords in exact lengths—even in inches. In addition to providing an organized and maintained work environment, having the exact length of power cords will greatly improve your server room's performance by minimizing the amount of clutter in an enclosure, which increases airflow and the life of the equipment.

Jacket flexibility. Oncore's power cords have a soft, flexible jacket for easy maneuvering inside the cabinet. The cord's flexibility is extremely important, especially when the cables have to make tight turns. In addition, our cables aren't shipped as a coiled cable with a tie wrap, which can cause kinking. They are shipped in bundles of 10, loose in the bag, which keeps the power cables in their natural state and free of kinks.

Data center- and lab-rated. Our power cords have been designed specifically for data center and lab environments. All of our cables carry a UL certification and are RoHS-compliant. In addition, they are rated to 250V, which can be used in either the United States or Europe.

Oncore Cables LLC
45 Post • Irvine, CA 92618 | (949) 777-2255 • www.oncorecables.com

oncore

Information Support Concepts WC Series 42U Server Racks

NEW PRODUCT

by Rod Scher

New Server Racks Overcome Pricing, Shipping Concerns

For more than 25 years, Texas-based Information Support Concepts has been a go-to vendor for a variety of server racks, cabinets, PDUs, KVMs, and other data center and telecom necessities.

Now, in response to tight budgets and increasing pressure on IT departments, the company has launched its new 42U series of server racks, consisting of the affordable Economy WC Series 42U Server Rack Cabinet ($799.95) and a secure, four-compartment Co-Lo variant ($1,750), both of which are available with free dock-to-dock shipping.

The 42U 19-inch WC Series server rack cabinet features a usable depth of 36.5 inches, a load capacity of 1,764 pounds, heavy-duty casters, and leveling feet. Designed for enhanced airflow, the WC Series offers a 71% ventilated high-density door and removable side panels, perforated top panel with cable entry access in the rear, and easily removable perforated front and rear locking doors. The cabinet, available in black, weighs 320 pounds and features four-post, depth-adjustable rack rails with square holes. The WC Series cabinets measure 80.91 x 23.62 x 39.37 inches (HxWxD). The new series is designed for deep, hot-running servers, such as those from Compaq, Dell, HP, IBM, and Sun.

Information Support Concepts WC Series 42U Server Racks
New racks available with free dock-to-dock shipping.

$799.95 (42U Server Rack Cabinet);
$1,750 (four-compartment Co-Lo)

If you're offering co-lo services, consider the WC Series Co-Lo version. It, too, is available with free shipping, and the co-lo variant features four secure 10U client compartments.

"Our feedback from network managers around the country is budgets have been slashed and when they have to buy a server rack, shipping cost is prohibitive," says vice president of sales and marketing Kevin Hunt. "We challenged our product managers to find a solution to this problem and feel our new WC Series server racks address both the pricing and shipping concerns of our customers."

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Leading Information Technology Products Since 1987

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www.iscdfw.com

PHYSICAL INFRASTRUCTURE | PRODUCT SPOTLIGHT

Power Distribution Units

Product

Black Box Outlet-Managed PDU

Description

The Black Box Outlet-Managed PDU provides complete power control for network devices, including capabilities such as remote and timed individual outlet switching, auto on/off/reboot, load shed switching, and outlet sequencing. It enables power switching for individual network devices or for groups of equipment in an effort to allow data center administrators to save energy by automatically powering down equipment at night or on weekends when it's not being used.

- Monitors equipment power, changes in current levels, circuit breaker status, temperature, and unauthorized access attempts
- Sends alerts by email, text, SNMP, SYSLOG, or audible alarms
- Generates reports with detailed records of current and power consumption
- Can be set to ping equipment at set intervals and reboot if there's no response

Best For: Reducing energy and personnel requirements in data centers.

Price: Starts at $676.95

Contact: (877) 877-2269 | www.blackbox.com

CyberPower PDU15SW8RNET

The CyberPower PDU15SW8RNET is an eight-outlet rackmount networked PDU that provides 120V 15A output and is made of rugged, industrial-grade metal. From a single NEMA 5-15P input, it delivers an unfiltered electrical pass-through current to eight NEMA 5-15R receptacles. The PDU15-SW8RNET provides a network connection through an RJ-45 Ethernet port and offers remote management.

- LCD screen provides real-time load monitoring measured in amps
- 10-foot AC power cord included
- Can be mounted horizontally or vertically

Best For: Organizations looking for a rugged, industrial-grade switched PDU.

Price: $595.95

Cyber Switching ePower

Cyber Switching's ePower family is targeted at data center managers searching for greener solutions that integrate rich features while providing high reliability and great value. Patented Individual Outlet Metering provides billing-grade metering for each outlet at an accuracy of 2% or better. Utilizing the unit's full-color LCD touchscreen or a standard Web browser, IT personnel can be kept up-to-date on critical information, including real-time power information, load details, input line utilization, and system status.

- Patented Cyber Breaker technology protects equipment by limiting overcurrent conditions to a single outlet
- Color LCD touchscreen for local management and setup
- Two high-speed USB ports support up to 127 peripherals
- More than 60 high-density PDU configurations
- Network connection for remote monitoring and management of your power usage

Best For: Companies looking to implement a comprehensive data center management plan.

Contact: (888) 311-6277 | www.cyberswitching.com

Product

Packet Power Smart Power Cables

Description

Packet Power Smart Power Cables offer the simplest and most affordable way to monitor the power coming into your racks. Inserted between your power strip and its power source, the cable transmits complete power usage data in real time over a wireless network where a small Ethernet Gateway gathers data from hundreds of cables and transmits it to your local monitoring application or to Packet Power's cloud-based Energy Analysis Service.

- Single- and three-phase power: 10 to 100 amps, 100 to 240 volts
- All connector types, including NEMA, IEC, Hubbell, and RussellStoll
- Supports any mix of circuit and device-level monitoring
- Completely vendor-neutral
- Grows easily from a few circuits to hundreds
- Supports single- and multiple-facility installations
- Costs 30 to 50% less than smart PDUs

Best For: Data centers that value ease of installation and an affordable price.

Contact: (877) 560-8770 | www.packetpower.com

PDUs Direct C-21VY-L2120

The C-21VY-L2120 from PDUs Direct is a three-phase vertical PDU with amp meters that offers the density support of three-phase power with the ability to load balance the phases using LED load meters. Additionally, it has 21 IEC C13 outlets, a locking three-phase NEMA L21-20P in-feed plug, and three integrated local amp meters (one for each phase). It also provides nearly twice (1.732 times) the power density of a standard 208V circuit, and it can be mounted in the rear dead space so as to not eat up rack space.

- Industrial-grade outlets and a steel case enclosure
- High-quality powder coat
- Three local LED phase meters with True RMS reading
- Includes a hardwired power cord

Best For: Small data centers that need overcurrent protection.

Price: $310

Contact: (888) 751-7387 | www.pdusdirect.com

PDUs Direct C-16V2-C20MX

The C-16V2-C20MX metered PDU from PDUs Direct provides several in-feed plug types and a local amp meter for the 16 NEMA 5-20R or 16 IEC C13 outlets. This PDU is designed to be mounted in the rear dead space to leave more space for equipment and ventilation. It also features local LED input current monitoring, which lets you accurately measure the amps from the connected power circuit, safely maximize the load, and reduce the risk of overloads.

- Industrial-grade outlets
- Steel case enclosure
- Premium powder coat
- True RMS reading with input current monitoring

Best For: IT managers who need to save space for equipment and ventilation.

Price: $295

Contact: (888) 751-7387 | www.pdusdirect.com

Processor's Product Spotlight highlights options available in key data center product categories, providing product information side-by-side for easy comparison.

Compiled by Seth Colaner

Cyber Switching Dualcom S

The Cyber Switching Dualcom S is for IT administrators who need to manage equipment around the clock. Cyber Switching's patented Cyber Breaker technology isolates overcurrent conditions to one outlet and protects other equipment on the bank, thereby reducing downtime. Individual current monitoring lets you track each outlet's usage and make informed decisions on how best to manage your power grid. You can also track temperature and humidity with optional environmental probes.

- Remotely monitor and manage your equipment through a Web browser, a Telnet session, or with SNMP commands
- Schedule times for outlets to power on and off
- Event logging
- Warnings for over- and under-currents
- RoHS-compliant

Best For: IT administrators needing an intelligent PDU with a robust feature set at a great value.

Contact: (888) 311-6277 | www.cyberswitching.com

iStarUSA Group Claytek WA-PD014 PDU

The WA-PD014 from Claytek (powered by iStarUSA Group) is a 12-outlet power distribution unit that provides additional outlets for managing rackmount power needs. The user-replaceable surge protection module is designed to offer years of power protection. The WA-PD014 PDU fits on standard rackmount racks or cabinets and is ideally suited for use with the WN Series cabinets, WJ portable racks, and WX Series racks from Claytek.

- 19-inch rackmount form factor
- 12 outlets
- Modular and replaceable surge unit
- Power and surge LED indicators
- Circuit breaker with prompt overload protection response
- RoHS-compliant

Best For: Small businesses in need of an easily managed PDU solution.

Contact: (888) 989-1189 | www.istarusa.com

Geist Master RSM PDU sold by Information Support Concepts

The 19-inch horizontal Geist RacSense Master RSM PDU offered by Information Support Concepts (part number RSMRN102-101D15ST5) is a PDU that provides power and environmental monitoring and remote notification along with power distribution capabilities. The device is designed to provide peace of mind, as user-defined alarm thresholds and remote notifications allow users to be aware of and react to problems immediately, thus preventing disasters from occurring and helping to maintain uptime.

- Internal sensors include current, voltage, temperature, humidity, airflow, light level, and sound level
- Connect up to 16 remote environmental sensors via RJ connection
- 10 outlets
- 15 amp 120V

Best For: Smaller IT shops that depend on a limited amount of equipment to maintain uptime.

Price: $528.75

Contact: (800) 458-6255 | www.iscdfw.com

Rackmount Solutions 30A Power Commander

The 30A Power Commander PDUs are high-current PDUs from Wiremold that feature a dual-circuit design that can draw 30 amps per unit. With UL 489-listed breakers to meet the new UL 60950-1 First Edition and ITE standards, the 30A Power Commander PDU also boasts current monitoring with -AM and -RAM units for per-circuit digital embedded or remote display ammeter readouts and a streamlined aluminum profile.

- 30A, 127V power distribution
- Universal slide mounting rail
- UL 489 printed circuit board connection breakers
- Customizable options

Best For: Small to midsized businesses looking for flexible mounting options for racks and cabinets.

Price: Starts at $199

Contact: (866) 207-6631 | www.rackmountsolutions.net

Raritan PX Series

Raritan's family of PX iPDUs (intelligent rack PDUs), combined with plug-and-play environmental sensors and Power IQ® software, provides IT administrators with power, environmental, and energy management data. The available iPDUs include outlet-metered/outlet-switched, outlet-metered and unit-metered PDUs, and inline meters.

- Provide kilowatts per hour usage (+/- 1% accuracy), current, voltage, active power, and apparent power
- Available in hundreds of configurations to suit specific needs
- Easy deployment and use
- Power IQ can gather data from almost any PDU or UPS on the market

Best For: Power, environmental, and energy management at the IT rack.

Price: Starts at $425

Contact: (800) 724-8090 | www.raritan.com

Server Technology Sentry Smart CDU CS-6HD/HY

The Sentry Smart CDU CS-6HD/HY from Server Technology is designed to deliver reliable three-phase power distribution as well as power and environmental monitoring both locally and over IP. The intelligent PDU features local LED input current monitoring to allow IT workers to measure the draw from network devices as well as the impact of new units on power, helping to prevent power circuit overloading.

- Web-based views of power, temperature, and humidity levels
- SNMP-based alarms and email alerts
- Digital True RMS current monitoring
- Uses UL 489-rated circuit breakers as an Over-current Protection Device

Best For: High-density IT environments.

Contact: (800) 835-1515 | www.servertech.com

PHYSICAL INFRASTRUCTURE | PRODUCT SPOTLIGHT

Environmental Monitoring

AVTECH Room Alert 11ER

Description

The Room Alert 11ER from AVTECH is an environmental monitoring device designed to help SMEs keep tabs on temperature, humidity, and other environmental conditions in computer rooms and data centers. The device keeps track of conditions via internal and external sensors and sends alerts to admins when predetermined thresholds are met or exceeded. The Room Alert 11ER's sensors can gather environmental information from multiple locations within a 1,800-foot radius and can be controlled and adjusted via an easy-to-use browser-based interface.

- Plug-and-play setup for immediate use, with or without a host PC
- Alerts can be sent by email, email-to-SMS, SMTP, Web page update, and more
- Real-time sensor status, data logging, and graphing
- Uses just 1U of rack space in a 19-inch form factor
- Includes one built-in digital temperature sensor, two digital sensor ports, and eight channels for switch sensors or dry contacts

Best For: Enterprises that need to protect mission-critical servers from changes in temperature and humidity.

Price: Starts at $485

Contact: (888) 220-6700 | www.AVTECH.com

AVTECH Room Alert 32E & 32W

AVTECH's Room Alert 32E and 32W are advanced hardware appliances designed for IT and facilities environment monitoring, alerting, automatic corrective action, and wireless sensor monitoring. They can monitor computer room temperature, humidity, power, room entry, and more in multiple locations, and they run using Power over Ethernet. Both models come with a full license of the AVTECH Device ManageR software, which automatically discovers devices, and a year-long subscription to AVTECH's Maintenance, Support & Update Service, with firmware and software updates, technical support, and full hardware replacement on the ID box free of charge.

- The 32W can accommodate about 100 sensors
- Password-protect built-in Web server
- Relay outputs let you remotely turn devices on or off, and 0-5V analog sensor inputs let you log information from other manufacturers' sensors
- Monitor units with built-in Web server, bundled Device ManageR, or any SNMP application

Best For: Enterprise-level monitoring in any location where running cables may be difficult or impossible.

Price: $995 (32E) and $1,195 (32W)

Contact: (888) 220-6700 | www.AVTECH.com

Black Box AlertWerks II ServSensor Junior (EME102A)

The AlertWerks II ServSensor Junior from Black Box is designed to provide detailed insights into the environmental conditions of smaller installations. This unit can be used as the central hub of the AlertWerks environmental monitoring system to track temperature, humidity, liquids, and open doors. Other applications include remote monitoring and management of HVAC systems, security equipment, UPSes, generators, and industrial equipment.

- Two ports accept a range of sensors, including temperature, humidity, water, and airflow
- Java-based Web user interface provides hub access over any IP network
- Sends alerts through SNMP or email

Best For: Organizations with limited environmental monitoring requirements.

Price: $250

Contact: (888) 433-5049
www.blackbox.com/go/alertwerks

Rackmount Solutions' Remote Physical Monitor

Description

The Uptime Devices Remote Physical Monitor unit from Rackmount Solutions supports remote monitoring that lets users protect equipment and sensitive electronics. The RPM uses Remote Intelligent Multi Sensors technology, which lets it collect environmental and security data to send alerts via email, SMS, or SNMP when the monitored equipment exceeds the user-defined limits. Each unit has a battery-backed clock for accurate recording, and the device also supports up to 250 different RIMS, located up to 1,000 feet away.

- Real-time monitoring of temperature, humidity, airflow, and dry contacts
- Dry-contact sensors for use with 10-port dry contacts and HEAT RIMS
- Monitor and control third-party power strips
- Two-port power RIMS monitor, track, and manage IT equipment current load and voltage

Best For: Data centers and standalone applications that require temperature, humidity, and remote power management.

Price: Starts at $799

Contact: (866) 207-6631 | www.rackmountsolutions.net

Sensaphone IMS 1000

The Sensaphone IMS 1000 is the ideal system for monitoring a variety of conditions, including temperature, humidity, physical security, smoke, and fire. In addition, power failure monitoring is built-in, and the IMS 1000 includes a rechargeable battery backup. IP device monitoring lets you make sure your network servers are functioning properly. With the IMS 1000, you can receive alarm notifications via email, text, or SNMP traps; a custom voice option is available.

- Built-in power failure features
- Built-in Web server provides quick and easy information about monitored conditions
- Includes eight inputs and one relay output

Best For: Companies in need of Web-based monitoring for a variety of conditions.

Contact: (877) 373-2700 | www.sensaphone.com

Sensaphone Web600

The Sensaphone Web600 provides Web-based monitoring at an affordable price. The Web600 lets you track critical temperatures and other conditions in computer rooms, data centers, and other areas, and it immediately alerts you via email, text, or SNMP traps when values are out of the normal range. The Web600 can read values from humidity, air quality, water leak detection, and other sensors.

- Completely standalone and easy to use
- Can connect up to six sensors to monitor a variety of equipment and conditions
- Built-in Web server provides quick and easy information about monitored conditions
- Optional battery backup

Best For: Organizations in need of a flexible standalone unit for monitoring temperature and other conditions.

Contact: (877) 373-2700 | www.sensaphone.com

Processor's Product Spotlight highlights options available in key data center product categories, providing product information side-by-side for easy comparison.

Compiled by Andrew Leibman

Black Box AlertWerks ServSensor Contact (EME111A-20)

The AlertWerks ServSensor Contact from Black Box is designed to let you remotely view the status of equipment and devices that use dry-contact outputs to send alarm signals. Data centers and other facilities can use the unit to monitor humidity, liquids, open doors, and critical over-temperature conditions. The device is also well suited to other applications, including HVAC systems, security equipment, UPSes, generators, and industrial equipment monitoring.

- Adaptable to a range of devices such as UPSes and building management systems
- Features eight autosensing RJ-45 ports for connecting sensors plus 20 additional two-wire, dry-contacts
- Rackmount chassis
- Extensive management and notification features

Best For: Organizations that want to customize a monitoring system to their particular devices.

Price: $900

Contact: (888) 433-5049
www.blackbox.com/go/alertwerks

ITWatchDogs RelayGoose II Environmental Monitor

The RelayGoose II Environmental Monitor from ITWatchDogs provides Web-based remote surveillance, data logging, and graphing of data center climate and power conditions. Equipped with an onboard temperature sensor, the RelayGoose II has capacity for up to 22 external sensors and provides three NO/NC relay outputs, useful for triggering external devices such as an auto-dialer or backup air conditioner on alarm or manually through the Web interface. It lets users keep an eye on the facility from a secure Web interface and receive SNMP (v1, v2c, v3), email, text message, and voice call alert notifications when user-adjustable thresholds are exceeded.

- A variety of environmental sensors can be connected, including temperature, humidity, airflow, water and smoke detection, power failure, and more
- Has an LCD display and built-in audible alarm buzzer
- Logs and graphs all measurements, allowing for trending and capacity management

Best For: Enterprises in need of an environmental monitor with relay output control.

Price: $649

Contact: (512) 257-1462 | www.itwatchdogs.com

Packet Power Environmental Monitor

The Environmental Monitor, or EM, from Packet Power is a small but powerful tool for data center administrators who need to efficiently monitor temperature and humidity. Each Environmental Monitor can track data and display facility heat maps from six points within a single cabinet, three points apiece for two adjacent cabinets, and a single point per cabinet in six adjacent cabinets. The EM is able to capture seven temperature readings and one relative humidity reading per unit, and it harnesses the Packet Power Data Grid wireless network for seamless deployment—all a company needs is one Ethernet port and one IP address.

- Simple and inexpensive
- Provides support for alerts as well as online access to real-time data and full historical reporting
- Can run off of battery or AC power
- Works with Packet Power wireless power monitoring solutions or as a standalone system

Best For: Admins that want a real-time view of the conditions in server racks and cabinets.

Price: From $190 (one rack, front and back) to $250 (six racks, front only)

Contact: (877) 560-8770 | www.packetpower.com

Server Technology Environmental Monitoring Control Unit-1-1B

Server Technology's EMCU (Environmental Monitoring Control Unit)-1-1B is an IP-based product that monitors temperature and humidity, features water and fluid sensors, supports four dry contact door sensors, and accommodates additional power-fed analog input sensors. A Web interface provides at-a-glance reports of temperature, humidity, water detection, and cabinet door status.

- Support for HTML and command-line interface
- Supports two temperature and two humidity measurements out of the box
- No additional software necessary
- Mounting tabs included for 0U mounting

Best For: Data centers, colocation sites, Web hosting facilities, telecom switching sites, POP sites, server closets, and any unmanned area that needs to be monitored.

Contact: (775) 284-2000 | www.servertech.com

Temperature@lert Cellular Edition TM-CELL300

Setting up the third-generation Temperature@lert Cellular Edition CELL300 is as easy as plugging it into an AC outlet. The device monitors one or two ambient temperature and/or humidity sensors and sends email, text message, or voice alerts when the readings exceed user-set limits. Built-in battery backup enables the device to operate for up to four weeks without power. The HealthCheck feature lets you know when the device has been out of communication or when it stops functioning, and AC PowerSensing lets you know when there has been a power outage.

- No network required—uses local cellular providers
- Features multiple alarm limits, with alerts via email, text message, and/or phone call
- Reports temperature and/or humidity readings every 15, 30, 60, 120, or 240 minutes
- Temperature@lert USB and WiFi editions are also available

Best For: Geographically distributed, remote, or mobile facilities and for situations where monitoring is needed even when power outages occur.

Price: $399.99 plus monthly monitoring plan (starting at $15 per month)

Contact: (866) 524-3540 | www.temperaturealert.com

Upsite Technologies Upsite Temperature Strip

The Upsite Temperature Strip, from the LOK family of solutions, features an acrylic self-adhesive backing that lets users install it on any IT equipment or cabinet door where the potential for hot spots and other heat-related issues exists. It accurately provides a visual reading of intake air temperatures based on standards established by the Uptime Institute, ASHRAE, and equipment manufacturers for acceptable operating ranges.

- Colored range indicators display reliable temperatures within two minutes
- Calibrated in accordance with ASTM standards
- Measurements accurate to within +/- 10 degrees Celsius
- Monitor the intake air temperature of any piece of IT equipment for a low cost per strip
- Displays same-sized Fahrenheit and Celsius temperature scales

Best For: Monitoring temperatures and hot spots on any IT equipment and in data centers.

Contact: (888) 982-7800 | www.upsite.com

FEATURE PACKAGE

Emerging Trends To Watch

We took four of the most-talked-about trends in the data center space and talked with experts to find out what you need to know.

The iPad Invades The Enterprise | 22

■ Why are the iPad and other tablets becoming so hot? And how will it affect enterprise IT departments? Understanding important aspects of the iPad trend can help IT prepare for the imminent arrival of tablets.

LEED Certification On The Rise | 23

■ Like most rational IT people, you strive to make your data center energy-efficient and sustainable. But getting a handle on how to achieve this can be difficult.

Modular Data Centers | 24

■ One increasingly popular method of providing a level of efficiency that doesn't inhibit growth and scalability is the use of modular, or pod, components in the data center.

Next-Generation Firewalls Are On Their Way | 26

■ Attention has been swirling around next-generation firewall technology for quite some time, and it looks like data center managers won't have to wait much longer. Users and vendors alike are glad to see all that potential goodness coming to fruition.

The iPad Invades The Enterprise

Prepare For The Arrival Of Tablet PCs With New Mobility Policies

by Cynthia Harvey

• • •

Ten years ago at the Comdex 2001 show, Bill Gates, then Microsoft's chairman and chief software architect, showed off tablet PC prototypes to the crowd. "I'm already using a tablet as my everyday computer," he told the attendees. "Within five years, I predict it will be the most popular form of PC sold in America."

For years, industry watchers mocked that prediction as tablets failed to catch on. Then came Apple's 2010 introduction of the iPad.

Unlike any tablet introduced previously, the iPad quickly became a huge hit with both consumers and enterprise users. Apple says it sold nearly 15 million iPads in 2010, including 7.33 million in the last quarter alone. Further, it claims that 80% of Fortune 500 companies are currently piloting or deploying iPads.

Mobility management vendor Good Technology (www.good.com) says that by December of last year, the iPad accounted for 22% of all mobile device activations by Good's enterprise customers. John Herrema, Good's senior vice president of corporate strategy, says he expects tablets to account for "over 30% of our activations for the year."

Why are the iPad and other tablets becoming so hot? And how will it affect enterprise IT departments? Understanding important aspects of the iPad trend can help IT prepare for the imminent arrival of tablets.

The Consumerization Of IT

First, experts say the adoption of the iPad in the enterprise is being driven in part by a phenomenon known as "the consumerization of IT." In short, "consumerization" refers to employees who expect to be able to use their personal consumer devices for work.

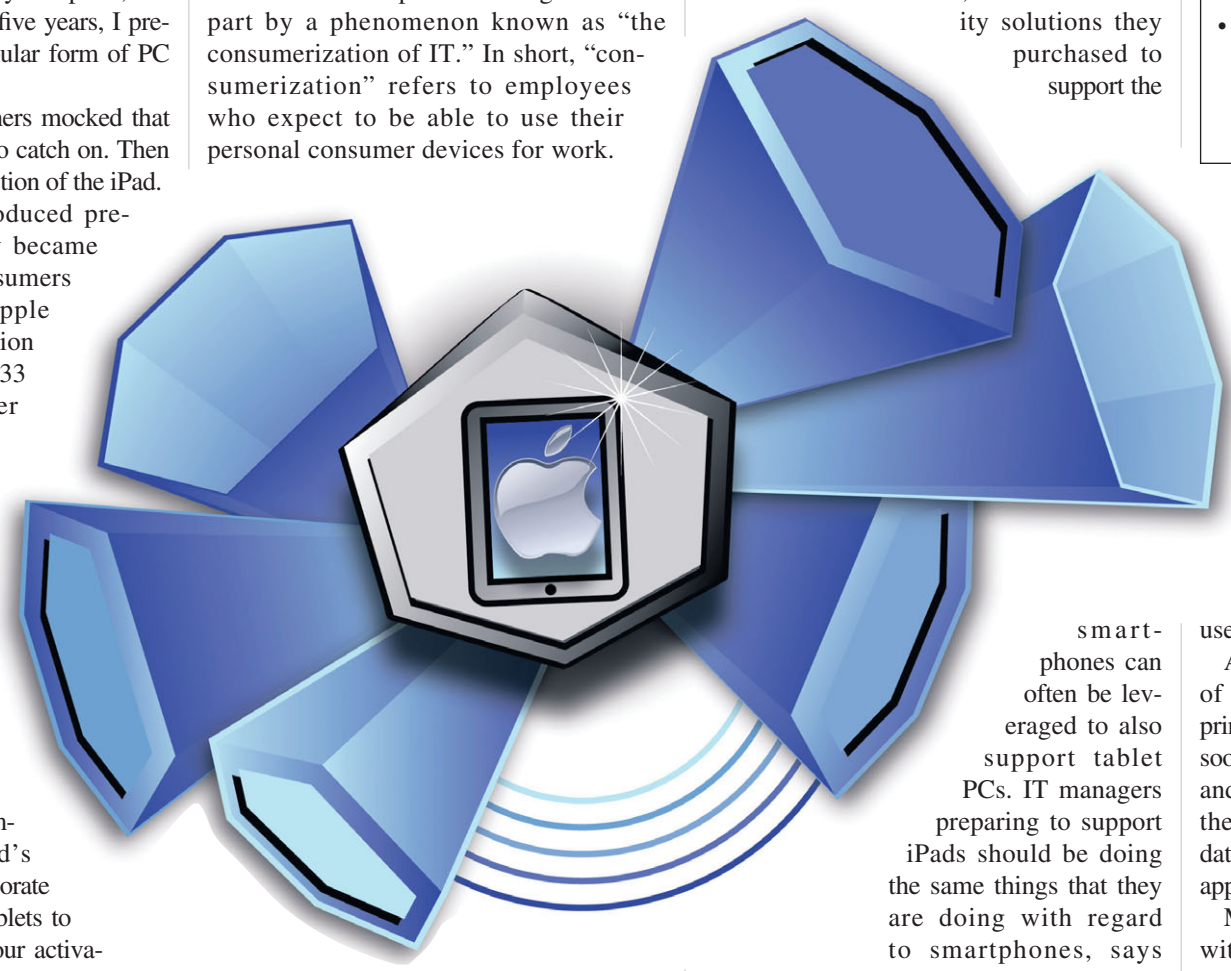
The trend toward consumerization has become particularly pronounced in the past year or so. In fact, a 2010 study by mobility solution vendor iPass found that 58.2% of mobile employees had used a personal device for work.

IT departments can prepare to deal with consumerization in two key ways. First, they need to work with management to establish BYOD (bring your own device) policies for end users. Second, they can research and implement technological solutions that will help secure, monitor, and manage those devices.

Building On The Smartphone Experience

According to Herrema, Apple's earlier success with the iPhone paved the way for success with the iPad. "Certainly, building on the reputation of that experience, people's familiarity with touch, and some of the new things that that platform brought along makes that transition a lot easier," he observes.

Just as their earlier experience with iPhones makes it easier for end users to transition to the iPad, it also makes it easier for IT to transition to supporting the iPad. In fact, the same mobility solutions they purchased to support the smartphones can often be leveraged to also support tablet PCs. IT managers preparing to support iPads should be doing the same things that they are doing with regard to smartphones, says Philippe Winthrop, managing director of the Enterprise Mobility Foundation (www.theemf.org). "They absolutely have to have mobility management solutions in place."



Another Device To Manage

Although some experts predict that tablets will eventually replace laptops for some users, so far that doesn't seem to be the case. "It does seem to be a plus-one device," Herrema says. "What I mean by that is it's being added on top of a smartphone and/or a laptop. In the short run, it's going to create some additional management burdens there."

For IT managers, the iPad is "just one more endpoint to have to manage and secure . . . regardless of who purchased it," Winthrop notes.

In other words, there's no denying that the iPad means more work for IT. "You have to have application management, expense management, procurement provisioning, help desk—all the things that they think about from a traditional desktop computing environment—now the exact same thing has to happen in a mobile environment," Winthrop says.

The Importance Of Apps

Another key factor in the success of the iPad is the availability of native apps, many of which were first created for the iPhone. "The iPad was the first to really catch on in the market in large part because it was able to build and leverage on the huge ecosystem of applications already available for the iPhone," Herrema says. "There's just a huge ecosystem of applications, both from a personal perspective and from a business perspective."

End users have come to expect that whatever they want to do on their iPads, "there's an app for that." They bring those same expectations with them as they use the iPad in the enterprise.

According to Ted Schadler, co-author of "Empowered" and vice president and principal analyst at Forrester Research, "As soon as you give someone email on an iPad and a calendar, they want to know where their employee portal is and where their data dashboard is and where their expense approval application is."

Mobilizing apps presents IT managers with a tremendous challenge. They need to get to work immediately on solving the technological problems involved and on managing employee expectations.

More Options To Come

As much as the iPad has impacted the enterprise already, experts say this device is really just the tip of the iceberg. They agree that many new tablets are likely to arrive on the market—and in the enterprise—this year.

"We'll certainly see continued traction with the iPad, but we'll also see increasing numbers of tablets based on other mobile operating systems," Herrema says. "You're going to see dozens and dozens of form factors coming out that take advantage of the Android platform."

He adds, "The most important thing for the IT administrator is to make sure that when you think about mobility and your mobility strategy, it has to be a cross-platform strategy that takes into account both smartphones and tablets." P

Key Points

- The arrival of the iPad in the enterprise means more work for IT departments.
- Companies need to establish new policies that govern how employees can use their personal mobile devices for work.
- A cross-platform mobility management solution can help IT manage and secure the iPad and the many other tablets that will be arriving in the enterprise soon.

Action Plan

Experts emphasize that best-in-class companies are approaching the iPad proactively. Instead of attempting to fight employees who want to use it for work, they're embracing the trend. However, in order to do that, IT managers need to take a few steps now.

1. Establish BYOD (bring your own device) policies for workers who want to use personal devices on the job.

2. Invest in a mobility management and security solution that handles multiple platforms and multiple form factors.

3. Create a plan for providing users with the apps they need and want.

FEATURE PACKAGE

LEED Certification On The Rise

As Interest In Going Green Grows, Enterprises Are Taking Aim At LEED Certification For Their Data Centers

by Robyn Weisman

• • •

Like most rational IT people, you strive to make your data center energy-efficient and sustainable, not only because of moral and environmental concerns but also because of the savings such a strategy can provide. But getting a handle on how to achieve this can be difficult. Although vendors and consultants offer recommendations, sometimes teasing out what works best for your particular setup from these experts can be frustrating.

That's why LEED certification seems to be gaining traction in IT circles. Devised by the U.S. Green Building Council, or USGBC (www.usgbc.org), LEED stands for Leadership in Energy and Environmental Design. Marcello Burgio, global director of consulting and professional services at Cognizant (www.cognizant.com), explains that LEED is a set of third-party ratings systems and certification processes designed to improve environmental and health performance through sustainable construction and development practices.

Key Points

- LEED certification provides data centers with clear guidelines on how to build or improve upon the efficiency and sustainability of facilities.
- Enterprises can use LEED guidelines as a checklist when planning changes to a data center or when building a new data center by taking a variety of issues into account before the actual work is done.
- Following LEED guidelines and attaining LEED certification should have a snowball effect on data centers, as new technologies make these goals more attainable and prompt vendors to offer more efficient products and services.

"LEED focuses on lowering operating costs, mitigating development risks, increasing property values, and increasing public recognition of these efforts," Burgio explains. "And LEED is becoming important to IT because, like other units of the enterprise, IT must also be a good corporate citizen in controlling its costs while reducing its dependence on non-renewable resources, [which] is not only good environmental stewardship but also good for the bottom line."

Getting The Guidelines

David Ronn, a LEED-certified attorney at Houston, Texas,-based law firm McGuireWoods, explains that USGBC developed LEED to give people guidelines on how to build buildings that are both more energy-efficient and people-efficient. "These guidelines range from an existing building, where you're going to do a variety of retrofits, to new construction, where you decide the best placement of the building [so that] people can easily use mass transportation and [do] things to provide the right kind of footprint and a healthy, sustainable environment," Ronn says.

According to the USGBC's Web site, LEED measures performance in several key areas, including Sustainability, where buildings are ideally developed on previously developed land and have minimal impact on ecosystems and waterways; Energy and Atmosphere, where buildings incorporate efficient design, energy use monitoring, and the use of renewable and clean sources of energy; and Materials and Resources, which encourages waste reduction, along with reuse and recycling.

Burgio says that LEED certification consists of submitting development or refurbishing plans to a local, voluntary LEED committee, which then awards points based on attainment of certification standards leading to silver, gold, or platinum levels of achievement.

Ronn points out that few organizations apply every single LEED guideline when doing a retrofit of an existing building or constructing a new one. "There are gradations, but at least from a planning perspective, LEED lets you think about your site logically and find the best ways to go about building or retrofitting," he says.

LEED & The Data Center

Ronn says that data centers differ from other commercial buildings because of their 24/7 natures and their tendencies to be energy hogs. Therefore, LEED is especially useful in planning a data center that can sustainably handle expansions, new equipment, and changing power demands.

"With LEED, you can plan the most efficient way to design your HVAC, handle general power consumption, and even how to lay out your cabling so that it all fits in the plenum," Ronn says. "It gives you a way to discuss these things on the front end, instead of halfway through, when you realize you didn't take X, Y, or Z into account because you didn't consider it beforehand."

Burgio says that adherence to LEED guidelines depends on an enterprise's view of the dual goal of cost containment and perceived environmental obligations. Fortunately, new technologies help make these goals more attainable so that future data centers can attain these higher levels of efficiency while continuing to meet operational objectives.

"IT managers will be pushed slowly into developing LEED-certified data centers, which will drive vendors and consultants toward offering services that help companies achieve LEED certification," Burgio says. "Initially, this will be a voluntary effort, but more company executives will feel the pressure to achieve certification as it becomes more firmly established."

Prepping For LEED

Burgio recommends reviewing your business requirements in a holistic fashion before moving ahead with planning. Then, take into account such primary LEED drivers as sustainable development, water savings, energy efficiency, materials selection, and indoor environmental quality.

"Investigate alternatives for each sector of the technical infrastructure, including utility power, heating and cooling, UPS, emergency power, and the like," Burgio says.

Burgio lists several innovative technologies for data centers to consider, such as wind or hydroelectric power to generate electricity; geothermal power to provide heating and cooling; low-power, low-impact fire/smoke detection and suppression systems; ultrasonic humidifiers; rotary diesel generation sets; CRACs (computer room air conditioners); hot/cold aisles; virtual machine topologies; and asset management software that automates the collection and reporting of LEED-related information.

"Work in partnership with your architects and developers and your local LEED committee to ensure an understanding of your objectives and how you plan to reach them through LEED participation," he says. "In other words, understand the business benefit first, in order to get corporate buy-in for the strategic investment. Then, research both old and new vendors to determine which products help you meet your energy goals." P

Action Plan

The Natural Resources Defense Council (www.nrdc.org) offers several tips for achieving LEED certification:

Set a clear environmental target when beginning the design phase of your project, decide the level of LEED certification your enterprise wants to attain, and settle on a set budget for the project.

Make sure your project team focuses on meeting your LEED goal within the budget you have set while maintaining the environmental and business goals of your project throughout the design and building process.

Consult with or consider hiring LEED-accredited professionals during the design and building process. They can highlight ways of offsetting certain costs with savings in other areas, offer ways to get LEED credits without increasing your budget, and find synergies in your project.

News

Videoconferencing & Telepresence Market To Double

Infonetics Research predicts the enterprise-related videoconferencing and telepresence market will more than double by 2015 to reach $5 billion. In 2010, Infonetics reports that enterprise videoconferencing and telepresence system revenue climbed 18% to $2.2 billion. "Communicating via video continues to be one of the top trends in telecom, as evidenced by strong growth in the enterprise video market," says Infonetics analyst Matthias Machowinski. Globally, Machowinski says, businesses are seeking "richer means of communications with their employees, partners, and customers," making enterprise videoconferencing and telepresence a "natural fit." Infonetics reports that software-based end points out-shipped hardware 10:1, while Cisco's acquisition of Tandberg lifted it to the top spot in the overall enterprise videoconferencing market, claiming 50% of market revenue last year.

Android & Windows Phone To Make Smartphone Gains

Research firm IDC expects the global smartphone market to grow 49.2% this year as more consumers and enterprise users turn in their feature phones for smartphones with more advanced features. Smartphone vendors will ship more than 450 million smartphones this year, IDC states, up from the 303.4 million smartphones shipped last year. Compared to the overall mobile phone market, the smartphone sector will grow four times faster, IDC predicts. IDC also calls for Android to take the top position among smartphone OSes this year with a 39.5% stake, while the Microsoft and Nokia alliance will make Windows Phone the No. 2 OS globally by 2015 behind Android's 45.4% share, jumping from a 5.5% market share in 2011 to 20.9% in 2015. IDC predicts Apple's iOS will dip from a 15.7% share this year to a 15.3% share by 2015, and BlackBerry will fall from 14.9% to 13.7% during the same timeframe.

SMB IT Spending & Hiring On The Rise

So far this year, SMB IT budgets have increased 8% compared to the last six months of 2010, according to a recent study from Spiceworks, a social business network. Spiceworks found that the average SMB IT budget is now $132,000, up from the $121,770 reported in the second half of 2010. The improvement marks the largest increase in more than 18 months, the study shows. More than 30% of the SMBs surveyed (businesses with less than 1,000 employees) plan on hiring additional IT staff. Smaller companies seem more confident in growth, with 33% of companies with less than 20 employees looking at hiring this year compared to just 17% of companies with more than 20 employees. About 15% of SMBs plan on hiring part-time staff.

News

Texas Instruments Buys National Semiconductor

Texas Instruments will pay $6.5 billion to acquire National Semiconductor in a deal that would make TI the world's third-largest semiconductor manufacturer after Intel and Samsung. National Semiconductor shareholders will receive $25 per share, a 77% premium over the company's $14 share price before the announcement. TI will pay cash and borrow $3 billion to $4 billion to finance the deal, which is expected to close in six to nine months. Both companies make analog semiconductors, which convert real-world data, such as temperature readings, sound, or touch inputs, into digital data that computers can use. Texas Instruments says the deal will increase the company's sales growth and pay for itself in three to four years.

Survey Sheds Light On Communication Trends

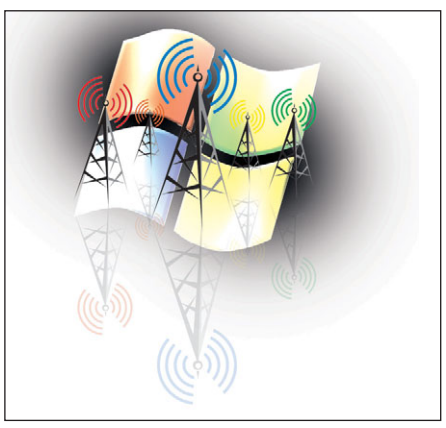
A growing number of businesses have remote workers—62% of businesses in total—and, as a result, newer, less traditional ways of communicating with clients and co-workers are becoming common. The findings were made by a Skype-sponsored survey that looked at current trends in business communications. According to Skype's findings, desktop video and social networking use in the office is rising, with 15% and 29%, respectively, of survey participants using these technologies more this year. Video callers listed cost savings, time savings, and better collaboration as incentives to use the medium. The survey also shows that VoIP calling is used by 20% of respondents at least once a week.

Forrester: Consumerization Of IT Growing

More than a quarter of enterprises are making plans to implement a general-purpose touchscreen tablet, according to Forrester's Forrsights Hardware Survey, pointing to increased adoption of consumer technologies by businesses. The report also showed that 4% of companies have already deployed tablets and 17% were testing tablets. The survey of IT decision-makers shows that 80% of IT organizations now support a greater array of smartphones and laptop PC models. Within the next two years, 82% of organizations anticipate a 5% or larger increase in the number of PC Web apps on company hardware. When it comes to the BYOPC, or Bring Your Own PC, movement, just 2% of enterprises have implemented the approach.

Microsoft Has Plans To Find Unused Wireless Spectrum

Microsoft announced an architecture called SpecNet that would sense and map where licensed radio frequencies are being used, which will help to let unlicensed devices take advantage of the free frequencies. Using SpecNet, Microsoft says, someone who needed bandwidth in a given area could find out which frequencies are available by estimating the area covered by the primary transmitter. Users of wireless devices would no longer be limited by radio spectrum license holders that opt to not use the bandwidth. The spectrum would be detected by a network of analyzers run by local servers.



FEATURE PACKAGE

Modular Data Centers

Prefabricated Units Give Enterprises Access To Affordable Scalability & Efficiency

by Dan Heilman

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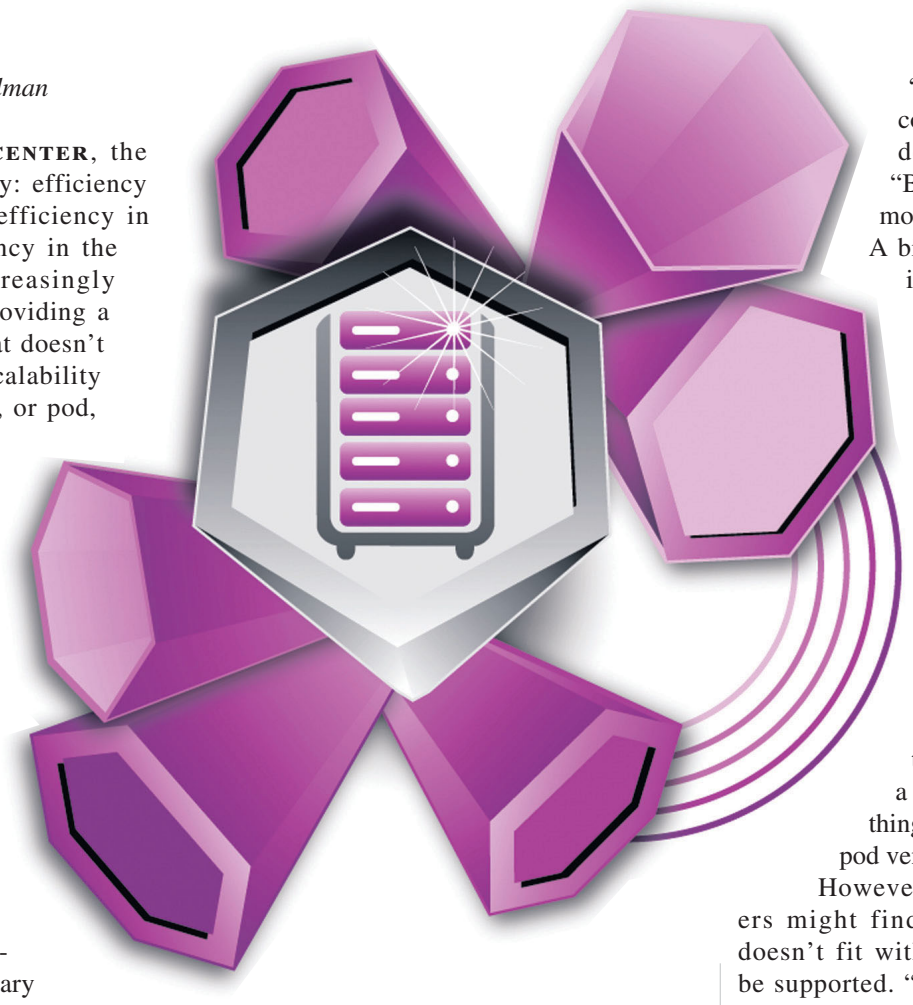

In today's data center, the key word is efficiency: efficiency in space allocation, efficiency in power usage, efficiency in the data itself. One increasingly popular method of providing a level of efficiency that doesn't inhibit growth and scalability is the use of modular, or pod, components in the data center.

Easy Efficiency

A modular data center pod uses preconfigured, prefab components that fit together more efficiently to provide extra space at a far lesser cost than hiring a construction crew to physically expand a data center. A modular data center can provide enterprises with three primary advantages: easy scalability, reduction in capital expenditures, and lowered operating expenses.

Those advantages aren't just there for existing data centers, either: With modular construction, a new company can be operational sooner, and modular design can more easily lend itself to cloud infrastructure services.

Key Points

- Modular data centers can allow enterprises to use space more efficiently and avoid construction costs.
- Modular components also save power by allowing heat-generating components to be separated by those that run cooler.
- Managers should plan carefully to ensure that modular components will work together effectively.

"Modular data centers provide a few critical benefits," says Carl Cottuli, vice president of product development and services at Eaton Wright Line (www.wrightline.com). "With its speed of deployment, a modular data center can be up and running in a much shorter time than a traditional build-out."

The growth of data is fueling the need for more reliable, higher-capacity storage solutions, according to Mark Hall, senior manager for enterprise storage at Hitachi GST (www.hitachigst.com). "IT managers are pushing the boundaries to make storage more efficient, from reducing floor space, power, and cooling to leveraging next-generation technologies like virtualization, deduplication, and thin provisioning," Hall says. "With the emergence of pod and modular data center build-outs, IT managers can address the need for additional storage on essentially an immediate-need basis."

"It's really about efficiency," says Paul Anderson, global head of data center hosting at Capgemini (www.capgemini.com). "The operating efficiency is a major factor, not just scalability and energy efficiency. It's the ability to pick them up [and] move them around as the need comes up."

Cottuli compares modular construction to the ease of buying a cake at a bakery instead of gathering the eggs and flour and doing the mixing and baking oneself. "The modular data center builder is the baker, and has all the issues and products designed together to deliver an operating data center in short order," he says.

More Power Per Square Foot

Not surprisingly, many of the benefits of modular data centers revolve around cost. Having flexible, compatible components in a scalable space can provide a built-in budget benefit if they're planned and deployed properly, according to Cottuli. "Modular data centers are already cost-optimized and eliminate expenses such as the design cycle, construction, development, vendor selection, integration, and testing," he says.

Anderson adds that another big cost driver is the cooling factor of modular data centers. "Any time you can better control your airflow management, it allows you to improve operating efficiency," he says. "Modular components let you separate the hot from the cold and reduce the size of the areas you need to cool."

Aside from keeping components with differing heat outputs away from each other, modular data centers also benefit from components' smaller form factors, according to Tom Weber, director of data center solutions and efficiency at Align (www.align.com).

"Servers are increasing in processing power per square foot," Weber says. "They're shrinking maybe not always physically, but from the standpoint of the resources needed to run them. The boxes are staying the same size or growing, but they're doing much more."

"Density is going up—cooling density and power density," Anderson says. "Blade servers are packing more ability into less space. A big cost driver is the cooling factor."

Possible Drawbacks

According to Dr. Mickey S. Zandi, managing principal, consulting services, SunGard Availability Services (www.sungardas.com), modular data centers can also make life easier for data center architects and managers. They reduce the need to manage and architect the difficult interfaces of a data center because these things are already done by the pod vendor.

However, Zandi warns, managers might find that some equipment doesn't fit within the pod or may not be supported. "This problem leaves the architect or manager with some difficult choices to be made," he says. "The architect or manager must decide how to overcome the limitations of the pod, how to support additional equipment, and how to interlock with equipment on the outside."

Still, modular units are worth considering for data center managers if only because of the ease of scalability that such an approach potentially presents. That pay-as-you-go model could be a great boon for enterprises looking to better manage ongoing expenses, according to Align's Weber.

"When we talk modular, we're still talking about looking at what we want out of the data center and only building out a quarter of it or half of it right now, and making the other portion of the facility available for expansion—either from the standpoint of space or cooling," Weber says. P

Action Plan

If data center managers are making infrastructure upgrades and want to go the modular route, what should they be doing to prepare their data centers for the future?

One strategy is to consider performance-optimized data centers—facilities that use large numbers of like products that need to be deployed quickly and in a related pattern—as a possible solution to infrastructure upgrades.

"Performance-optimized data centers such as colocations and similar user-driven arrangements are generally a good fit," says Dr. Mickey S. Zandi, managing principal, consulting services, SunGard Availability Services (www.sungardas.com). "Other means could include the use of pods to make an unsatisfactory physical location workable. Data center managers making infrastructure upgrades may find pods to be a cost savings."

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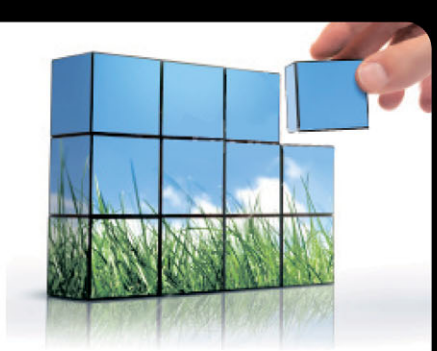

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News

Study: Social Networking Info A Hot Commodity

Symantec's latest Internet Security Threat Report finds that cybercriminals have been forced to lower the prices they're asking for stolen credit cards, to as low as 7 cents a number. Symantec's researchers claim that the stolen card black market is simply saturated, and lower prices are the only way they can unload the excess inventory. Social network credentials, on the other hand, are still a hot commodity that cybercriminals leverage for distributing malware and spam. Symantec also highlights the potential hazards of shortened URLs in social networking, which are difficult to verify until they have been clicked. The security firm claims that users clicked 73% of the malware-infected shortened URLs 11 times or more. Of the infected URLs Symantec observed, 65% were shortened URLs.

Survey Highlights Pervasive Nature Of Smartphones

According to a new study from Motorola Mobility, smartphones' growing ubiquity is making it increasingly difficult for Americans to "disconnect" from work-related communication. For the study, Motorola Mobility polled 1,000 Americans on when and how they use their mobile devices. About half of those surveyed report having been awakened by work-related emails, calls, or text messages, and 53% claim to have used a smartphone to check work-related email while on vacation. More than half have added coworkers as friends on sites such as Facebook and Twitter. Other findings show that 15% have accidentally emailed a personal note to a colleague or client from their smartphones; 14% have replied to work-related emails from the comfort of their beds; and nearly a third of respondents admit to using their smartphones to listen to music, text, watch a video, or play a game to pass the time during a work meeting.

Acer CEO Resigns

Gianfranco Lanci has resigned as CEO of Acer. He will be replaced by Board Chairman J.T. Wang until a permanent replacement is found. Lanci had been in disagreement with the board over the company's direction after recent disappointing revenue prospects. In spite of months of discussion, there was no consensus in areas such as scale, growth, customer value creation, and brand position enhancement. In addition to revenue shortfalls, Acer's PC shipments of late have been flat. Acer had been doing well until the introduction of Apple's iPad, which cut into sales. The company believes the release of its tablet will put it back on track and says the PC will still remain its core focus.

Processor Market Shares Hold Steady

A recent report from iSuppli found that the revenue shares for processors remained pretty much the same from 2009 to 2010. Intel dominates the market with an 81% share of total microprocessor revenue, up 0.4%. AMD came in second with an 11.4% revenue share, which was down 0.8% from 2009. Overall, iSuppli indicates that microprocessor revenue jumped 25% in 2010 to $40 billion, which was a nice recovery from the 6% drop between 2008 and 2009. One of the biggest impacts on the processor market was tablets; iSuppli estimates that tablet shipments totaled 17.4 million in 2010.

FEATURE PACKAGE

Next-Generation Firewalls Are On Their Way

The Latest Developments Include Improved Contextual Filtering & Better Mobile Device Support

by Julie Knudson

• • •

Attention has been swirling around next-generation firewall technology for quite some time, and it looks like data center managers won't have to wait much longer. Users and vendors alike are glad to see all that potential goodness coming to fruition.

"We started talking about next-generation firewalls in late 2004, early 2005," says John Vecchi, head of product marketing at Check Point Software Technologies (www.checkpoint.com), "and here we are now in 2011 and it's finally really happening. And I think it's about time."

A number of factors—from technology advances to customer requests—are converging to at last move next-generation firewalls from concept to reality.

Key Points

- Single try-to-do-it-all appliances could soon be replaced by individual, highly targeted devices.
- Virtualization and the incorporation of mobile devices are making location-based policies obsolete.
- The impact of increasingly stringent compliance requirements may be mitigated by next-generation firewall technology.

Multiple Appliances With Specific Jobs

Instead of a single firewall protecting the entire network, we may see a shift toward the use of multiple devices, each targeted at a specific application or platform.

"What we'll see more of in the future are these mini-devices that are going to be handling different roles within the network," says Cory Crosland, president of CROSCON (www.croscon.com). This change in focus will allow each device to encompass the kind of comprehensive protection that today's applications—with remote access, storage in the cloud, and user-specific policies—need in order to remain secure. Crosland explains, "It's not so much one appliance that's going to be the silver bullet, as it's going to be a lot of these smaller devices that are controlled by a larger unit or just completely controlled independently of each other."

Mobile Device Control

Enterprises are increasingly filled with remote users and employee-owned devices, which place greater demands on traditional firewall architecture.

"Typically you have your point-to-point VPN or your site-to-site VPN," Crosland says. "The ability to support mobile [access] is a different kind of thing." Working with vendors to stay current on the new clients coming to market is key, and the trick with mobile devices is to deploy a system that can authenticate them.

Vecchi agrees that mobile devices are a primary factor in many of the next-generation firewalls currently under development. The need for productivity and an ever-sharpening focus on revenue generation means that, after years of disallowing these non-corporate devices, data centers now need to grant them secure access. "We see the explosion of IT consumerization to the point where organizations can't prevent users from using these devices," he says. "They have to embrace them and try to figure out how to allow their usage because it's critical to the business."

Mobile devices change many of the fundamentals of firewall deployment. "Classic network security was built with the idea that there is a physical perimeter," says René Bonvanie, vice president of marketing at Palo Alto Networks (www.paloaltonetworks.com). "You cross it and you no longer have the privileges to access the information, but as long as you stay inside of it, you're fine. That no longer works." He says firewalls are seeing the birth of what he terms a "logical perimeter," which isn't tied to a building or other physical location and instead travels with an employee wherever he goes and on whatever device he uses.

Shift To The Cloud

Organizations of every size are moving applications, services, and other infrastructure to the cloud. That move can have both positive and negative impacts. "On one hand, it's really moving [data centers] toward consolidation and being more efficient," Vecchi says, "but on the other hand, it's opening up a whole other set of issues, which is 'How do we secure this?' and 'How do we control it?'"

Bonvanie cites the increasing use of cloud technology as a primary concern for firewall vendors. "The data center leaving the building poses a massive security challenge," he says. "A classic port-based stateful inspection firewall becomes useless in the cloud. It is no longer relevant." The challenges may be significant, but they can be resolved by the technology available in next-generation firewalls. By talking with some of the vendors who specialize in helping enterprises move to the cloud, data centers can streamline the transition.

Compliance

Regulatory compliance issues may be the push some companies need to move to next-generation firewall technology sooner rather than later.

"At the end of the day, it's the biggest driver around security," Vecchi says. "Even the smallest organization can have incredibly stringent requirements." Mandates such as those surrounding PCI DSS and Sarbanes-Oxley are often joined by user-directed requirements, state-level regulations, and corporate governance stipulations. The consolidation of security elements and applications, improved compliance reporting, and the implementation of a system that reduces risk are among the positive benefits to consider when thinking about next-generation firewalls. P

Action Plan

Shift your mentality. According to René Bonvanie, vice president of marketing at Palo Alto Networks (www.paloaltonetworks.com), "Most security people think black or white; something is good or something is bad. The reality isn't so easy." He suggests that IT groups move to policy models based on application, user, and content. Now is also the time to make peace with the transformation of social media into a legitimate business tool.

Don't underestimate your users. If you're putting simple controls in place, such as URL filters, don't think your users don't know how to get around them. Instead of assuming you're safe, get in front of the issue early and start talking with business partners now to determine what your firewall needs will be down the road.

DIY vs. outsource. You ultimately have two options: establish and manage the systems internally, or hire another company to do it for you. Do a cost-benefit analysis for each and then select your strategy. Once you know which way you're going, you can start putting together budget and other resource plans.

Remember the revenue opportunities. If you're providing firewall services to other companies, you have a chance to improve your organization's bottom line. "You want to start getting proactive about security in a big way and arm your service offering from that standpoint," says Cory Crosland, president of CROSCON (www.croscon.com). "Work with vendors to get some of these services in place that you can offer to your customers. I think a lot of data centers will see this as a new way of generating revenue for the business."

FEATURED PRODUCT

The Future Of Firewalls

Palo Alto Networks Takes Enterprise Firewalls Into The Next Generation

by Blaine Flamig

• • •

Palo Alto Networks offers real innovation in the firewall, enabling unprecedented visibility and control of applications and content. Redesigned from the ground up, Palo Alto Networks' next-generation firewalls—the PA-500, PA-2000, PA-4000, and PA-5000 series—help enterprise organizations to safely enable the use of apps such as Facebook, Salesforce.com, and WebEx. The unique capabilities of Palo Alto Networks firewalls signal the increasingly dramatic shift in how today's workers operate—their mobility and their need to collaborate beyond simply email and IM.

Built on single-pass software architecture, the PA-2000 Series includes the PA-2050 (1Gbps firewall throughput; 500Mbps threat prevention throughput; 300Mbps IPsec VPN throughput) and PA-2020 (500Mbps; 200Mbps; 200Mbps) models; the PA-500 firewall offers throughputs of 250Mbps, 100Mbps, and 50Mbps. Palo Alto also offers the PA-5000 Series and the PA-4000 Series for more demanding large-enterprise deployments.

All of Palo Alto's firewalls integrate the company's App-ID, User-ID, and Content-ID technologies, each of which are integral pieces of the PAN-OS platform. Combined, the technologies give enterprises previously unavailable visibility and control over applications, users, content, and actions rather than providing control only at the port, IP address, and packet level, as traditional firewalls do.

Thus, in a time when the apps on which workers are steadily relying have the ability to circumvent traditional port-based firewalls by jumping ports, using nonstandard ports, and using such tactics as SSL and SSH, Palo Alto Networks' firewalls enable enterprises to welcome the use of Web 2.0 apps but still preserve absolute policy-based visibility and control.

This visibility and control comes via the use of intuitive, graphical application traffic tools and by putting in place positive enforcement app-usage policies, such as allow, deny, schedule, inspect, and apply traffic shaping. Integration with Active Directory, LDAP, and eDirectory allows for policy-based visibility and control over who is using apps, and support for identifying Citrix, Microsoft Terminal Services, and XenWorks users enables visibility and control over those usages.

More conventional approaches to restoring the visibility and control that traditional firewalls can no longer offer often involves deploying duplicate local and remote user policies that can result in the inaccurate classification of traffic, as well as numerous scanning processes resulting in latency issues. Conversely, Palo Alto's firewalls accurately identify and control apps no matter the port or protocol in question.

Additionally, Palo Alto Networks' firewalls scan content and prevent data from leaking, all from just one network device. Financially, that translates into enterprises shelling out less in capital and operational expenses without compromising their ability to block vulnerability exploits. P

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As an authorized reseller of Palo Alto Networks' next-generation PA-5000 Series firewalls, Integration Partners (www.integrationpartners.com) knows the importance of helping its customers configure "proactive security that never stops." Integration Partners believes that data security isn't an option for companies where matters of compliance, maintaining public confidence, and staying competitive business-wise are concerned—it's a necessity.

Founded in 1999 and based in Lexington, Mass., Integration Partners specializes in implementing open and scalable unified communications and secure network infrastructures. Beyond helping companies enlist enterprise-grade firewalls, it also helps integrate LANs and WANs, establish green data center operations, centralize network management, and create global policy provisioning.

A certified Avaya Platinum Partner and Juniper Elite Partner, Integration Partners' prowess at configuring robust and secure network infrastructures stems from the top-level vendors it partners with, including Palo Alto Networks, and its team of certified engineers that works hand-in-hand with customers' IT and business teams at the planning stage on through testing and verifying the network infrastructure's functionality before turning it live. After deployment, Integration Partners continues to oversee monitoring and support tasks, vowing to "not rest until your network performs so well, you never have to worry about it."

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TECH IN-DEPTH

Key Points

- Sidejacking attacks involve hackers or criminals stealing cookies, usually via wireless networks. They then use the information from these cookies to surreptitiously log in to the victims' Web-based accounts.
- This form of man-in-the-middle attack has been around for a while and is also known as session hijacking.
- Prevention strategies involve encrypting the cookies themselves and the entire browser session via HTTPS, logging out of Web sessions when done, regularly clearing cookies from browsers, and treating all open public networks as untrustworthy.

Sidejacking Explained

Cookies Are Bad For Your Security Health

BY CARMI LEVY

Sidejacking is nothing new, but it is of growing concern to IT security administrators. In such an attack, a hacker intercepts a cookie—typically used to retain user-specific information such as username, password, and session data—and then uses the information it contains to gain access to a Web-based service.

This form of attack, once referred to as session hijacking, is a variation of the man-in-the-middle attack and is a growing threat as the Web becomes a more capable application delivery platform. The popularity of wireless networks, especially unsecured public hotspots, makes it relatively easy for attackers to locate and pursue victims. The increased reliance on Web services by end users further raises the stakes for identity theft.

The majority of Web sites, services, and applications now use cookies to increase convenience—for example, obviating the need for users to re-authenticate every time they connect to a Web site. Because cookies contain the security equivalent of an entire set of keys to the house, however, they are prime targets for this type of attack.

WHAT'S THE RISK?

Given the growing reliance on Web-based services, the impact could be significant. A hacker could use information stolen during a sidejacking attack to subsequently log in to a user's Web-based email account or online application suite.

"Ultimately, the risk is that your user's data is compromised, which in turn affects your reputation with them," says Robert Hanson, applications development manager with QTS (www.qualitytech.com). "If your end users are the general public, this typically means loss of users and a lot of bad press. If your users are business clients, compromised data not only affects your relationship with your client but could also mean a loss of revenue or possibly even a lawsuit."

Companies not running secure Web services for remote employees put themselves at greater risk compared to those that implement secure VPNs and end-to-end encryption. Wi-Fi hotspots are another area of vulnerability.

"The risk in public wireless networks is very high," says Marcos Santiago, information security analyst with Scotiabank Canada (www.scotiabank.com). "At this point, I would not recommend connecting to a public, unknown wireless network at all, unless it is absolutely necessary."

WHAT CAN YOU DO?

To reduce the risk of sidejacking-based attacks, Santiago recommends either encrypting the cookies or encrypting the entire browser session by delivering everything over HTTPS. Advise users to avoid simply closing the browser session when they are finished working. Instead, they should log off of the Web session from within the app itself. They should also clear cookies from all browsers regularly.

Hanson says organizations looking for even stronger protection against sidejacking should keep track of users' IP addresses, browser types, and versions to ensure they don't change during the course of a session. P

Keep Your Defenses Up

Although corporate networks are somewhat less exposed to sidejacking, Marcos Santiago, information security analyst with Scotiabank Canada (www.scotiabank.com), warns IT against becoming complacent, as it's possible for disgruntled employees to use similar techniques on colleagues. He says detection is difficult, even on a monitored network, because once the cookie has been compromised, an attacker logging in looks just like any other user. IT security must focus on traffic sniffing to identify the signature of a sidejacking attack before the attacker has a chance to actually steal the cookie.

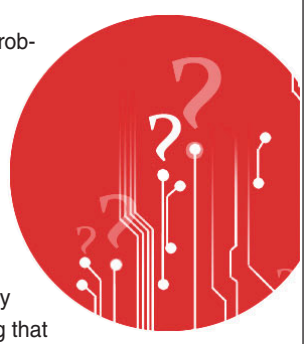
News

Electronics Industry Faces Uncertainty In Wake Of Japan Disaster

The electronics industry could see supply chain disruptions and rising component prices in the wake of the March 11 earthquake and tsunami in Japan, but analysts say it's too early to predict what long-term impact the disaster could have on the industry.

Klaus Rinnen, a managing vice president at Gartner, says it is difficult to gauge the severity of any disruptions because of the complexity of the industry's supply chains. Several factories have shut down because of damage or power outages, and it is unclear when they will be able to return to normal production levels. The earthquake caused severe damage to transportation networks in the northern part of the country, and analysts are also predicting power shortages this summer, which will further hamper production.

According to Gartner, the products that are most likely to see supply disruptions are Li-Ion batteries used in notebook computers and mobile phones; BT resin, which is used to make semiconductors; and silicon wafers, also used in semiconductor production. The Shin-Etsu factory at Shirakawa, which accounts for about 20% of worldwide 300mm silicon wafer production, has been shut down since the quake, and the company has not announced plans to restart production as of early April.



Despite these problems, Rinnen says shortages are probably a worst-case scenario because of built-in buffers in the supply chain. Assuming that many factories will be able to restart production within the next few weeks, and that other manufacturers can pick up the slack, any shortages in components should be avoided.

"We will probably squeak by," Rinnen says. "In the midterm, however, concerns about supply will last until early 2012 depending on how strong demand is."

Effects On The Market

Rinnen says the uncertainty in the market has caused many manufacturers to buy from more than one supplier in order to build up their inventories; this is a form of insurance in case one manufacturer is not able to deliver. According to Rinnen, this could actually be good for the market as a whole because it could drive competition between manufacturers. Some analysts have also speculated that the drop in production from Japanese manufacturers will give competitors in other countries a chance to grab market share.

Rinnen says analysts have seen initial price fluctuations for some components affected by the disaster. The most likely scenario is that rising memory prices could force manufacturers to raise prices on low-margin equipment such as entry-level servers, netbooks, or media tablets. There will be some price increases overall, he says, but it's too early to predict how severe they will be.

"The dust is settling," Rinnen says, "but it's still somewhat of a fluid situation."

by Kyle Harpster

SECURITY

Point-To-Point Encryption & PCI Compliance

A Quick Guide To The Technology & Its Impact

by Mike Chapple

• • •

Many vendors are touting point-to-point encryption as a solution to limit the scope and expense of complying with PCI DSS (Payment Card Industry Data Security Standard), a regulation affecting all merchants that process credit card transactions. Although encryption by itself does not ensure PCI compliance, it can be a powerful tool in reducing the scope of the actions necessary to comply with the standard. Late last year, the PCI Security Standards Council released preliminary information on how it will regulate this important new technology.

Unless merchants take actions designed to limit the scope of their payment processing networks, it includes every system that stores, processes, or transmits credit card information as well as everything connected to those systems. Merchants typically segment networks to reduce the scope, and therefore the cost, of compliance efforts. This is often accomplished by physically segmenting the network, but the use of encryption allows merchants to perform segmentation logically.

Enter a technology known as point-to-point encryption, or P2PE. In this approach, a merchant purchases equipment that encrypts credit card information at the earliest possible moment—when the card is swiped through the hardware reader at the point of sale. This encrypted credit card number is then transmitted directly to a third-party payment processor who is the sole holder of the required decryption key. Neither the merchant nor anyone able to intercept the communication back to the service provider has the ability to decrypt the card number. The hope is that this technology will greatly reduce the burden of PCI DSS compliance on the merchant, who has no access to the card number in electronic form.

Guidance Available

Until recently, there hasn't been much guidance available to merchants considering P2PE solutions. Vendors touted these products as panaceas for PCI compliance, while the standard itself was vague on the issue. In an effort to clarify the matter, last October, the PCI Security Standards Council released a roadmap on point-to-point encryption technology and PCI DSS compliance. In the document, the council clearly spells out four requirements for maximizing the benefit of P2PE:

1. The cardholder data must be encrypted immediately after it is read by the device.
2. To be considered out of scope, components of the merchant's network must have no access to unencrypted cardholder data, encryption keys, or decryption functions.
3. Cardholder data must not be decrypted until it is received at the secure processing location.
4. P2PE devices, key management techniques, and cryptographic technology must be validated by an independent assessor.

Merchants see this guidance as an opportunity to inexpensively reduce the scope of their compliance efforts, and it seems that this was the intent behind the roadmap.

"Point-to-point encryption is getting a lot of lip service lately, and rightly so," says Gary Glover, director of security assessment for SecurityMetrics, a payment application security firm (www.securitymetrics.com). Glover served on the committee that developed the roadmap and says that the technology has great promise. "It has the potential for real scope reduction for the customers I work with. Our really big clients are champing at the bit. Some have already implemented P2PE, and others are asking us to look at it," he says.

Firms considering using P2PE to limit the scope of their PCI-regulated environments should remember that there are still scenarios that could put elements of the environment back into scope. Sean Curran, director of Protiviti's risk management consulting practice in Chicago (www.protiviti.com), says that merchants must avoid being lulled into a false sense of complacency. "Organizations need to be aware that P2PE is not a silver bullet for compliance, nor does it remove an organization's requirement to comply with the PCI DSS. Proper education and understanding of the control requirements are still necessary," he says.

Complete Assessment

Merchants implementing P2PE to reduce their compliance burden should take the opportunity to perform a complete business process assessment of their card handling activities to ensure that legacy practices aren't jeopardizing their compliance status. Glover shares some common examples of the pitfalls merchants encounter when seeking compliance through P2PE:

- Unencrypted card data stored on the network as a remnant of an old business process
- Storage of scanned images of credit cards or physical impressions of credit cards
- Handling paper forms submitted by customers and containing credit card numbers
- Documentation required by banks for chargeback investigations

Merchants might find it helpful to consider this part of the process a "search-and-destroy" mission where they seek to meet two goals. First, they should modify business practices to minimize the collection and retention of credit card numbers to the greatest extent possible. In many businesses, it's not unreasonable to set a goal of completely eliminating access to card data. This is especially practical in retail environments where there is no need to maintain card data as part of a long-term customer relationship. The second goal of the process is to eliminate legacy records containing unencrypted card numbers. Success at this effort likely involves the use of electronic scanning along with the manual scouring of paper records stored in file cabinets and desk drawers.

Is it time to consider P2PE as a solution in your environment? Glover thinks the card processing industry will move ahead of the regulations, setting the tone for future regulation. "The standard probably won't catch up for 12 months," he says, adding that merchants with flexible environments are more likely to be earlier adopters of P2PE technology than their more entrenched counterparts. "You're going to see some of the really big merchants and processors find it more difficult to adapt their infrastructure. If you're small and nimble, you might move forward more quickly."

You can expect to hear more on this topic over the coming months. The PCI Security Standards Council plans to develop additional standards, testing criteria, and training programs that cover P2PE. It will also be an important part of the council's education and outreach Web seminars, training programs, and community meetings. This might be a good time to spend a year on the sidelines, watching how P2PE technology and associated regulations evolve. P

Key Points

- Point-to-point encryption provides an opportunity to inexpensively reduce the scope of PCI DSS compliance.
- Merchants will move ahead of the regulations with P2PE implementations.
- The PCI Security Standards Council plans to develop additional standards, testing criteria, and training programs.

P2PE Food For Thought

If you're considering the use of point-to-point encryption in your environment, Sean Curran, director of Protiviti's risk management consulting practice in Chicago (www.protiviti.com), suggests you consider the following factors:

- Your ongoing requirements for access to card information.
- Your requirements for securing other personally identifiable information.
- The costs and benefits of deploying new hardware to support the technology.
- Your provider's capability to securely manage the encrypted data.
- The ease of transitioning to a new provider if you find the need to switch down the road.

SECURITY

BUYING GUIDE

Buying Tips:

Email Security Appliances

by Marty Sems

• • •

Email security is a critical component of any organization, and any appliance tasked with safeguarding email communication needs to be efficient and reliable. Here are the essential elements you need to consider when comparing email security appliances.

Total cost. "The acquisition cost is only part of it," says Vircom Marketing Manager Damien Ramé (www.vircom.com). Service and support options, renewals, updates, and upgrades are also key factors. In addition, he says, IT admins will likely keep the appliance for a while, and if it's adequate, they'll stick with the same vendor. "Therefore, the longer-term costs must be evaluated and fit within the allocated budget," Ramé says.

Availability, security, and other features. Before purchasing an email security appliance, Joe Fisher, executive vice president of worldwide marketing at Axway (www.axway.com), says you should "think holistically about the problem set" facing your organization. "What is best going to serve the business, both today and in the future?" he asks. "What you don't want to do is roll out a solution that solves the problem yet demands that every month you have to reinvest in it."

Businesses rely on email around the clock. That necessitates 24/7 protection on the part of the security system, Ramé says. "The appliance must have built-in redundancy for the power supply and the hard disks," with a minimum of RAID 1 data mirroring protection, he says.

"Email security appliances do a lot of disk I/O for storage, reporting, quarantining, and archiving. For larger organizations, this is often a bottleneck," Ramé says. "Fast hard drives and RAID 5 configurations provide increased disk throughput and redundancy and are ideal for this kind of appliance."

Fisher cites a need for flexible scaling both up and down the capacity scale as your organization's needs change over time. After all, he says, "the volume of email isn't going down."

Device security is also essential, Fisher says. "Does the solution meet your security profile? Does it have the right certifications from a FIPS standpoint? Is that important? Are they using the right encryption algorithms for securing the data?" An IT data center manager or messaging architect should think about business, security, and architectural needs before choosing a product, he says.

Fisher also recommends that you choose an appliance with the right controls, governance, and visibility for your organization. "It's not only an IT operational thing; there are business unit requirements, and perhaps even C-level requirements, that may need to be met."

Watch vendor claims. Vendors often tout high spam filtering rates and low false positive rates. But both can be exaggerated, Ramé says. Instead, the proof of an appliance's merit is in independent tests from neutral third parties.

Also, when evaluating vendors and their offerings, Ramé says you need to ask these important questions: Does the company excel at service and support? Can it actually solve the problems you may experience, or will it ask you to reboot the appliance every time there is a glitch? Does it offer overnight replacements for defective units? Are the units maintenance-free, or do they require weekly tuning and fixing?"

Ease of use. Both the administrator and user interfaces of an email security appliance need to be easy to navigate, Ramé says. They might be accessible via browser, console, or installed app, but they should be clear and simple to understand so they don't waste busy employees' time. P

Buyers' Checklist

- ☑ **Reputation.** Is the vendor's email security technology well-regarded?
- ☑ **Effectiveness.** How much spam and malware does the appliance actually block?
- ☑ **Performance.** Does a system pose a bottleneck under your company's network demands?
- ☑ **Price.** Beyond the purchase and setup cost, how much will updates and support cost?
- ☑ **Ease of use.** Are both end-user and administrator interfaces straightforward?
- ☑ **Reliability.** Does an appliance have high availability features?

Key Terms

Appliance. A standalone device for running a particular application, such as email security.

Hardened. An operating system that has been made more secure, such as what's found on most security appliances.

Managed. An appliance that "phones home" to be monitored by its vendor.

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Network Box USA
Data Leakage Prevention Software

NEW PRODUCT

by Marty Sems

Stop Information Leaks

Customer info is a major privacy and security concern these days, and so are intellectual property, detailed product roadmaps, trade secrets, and strategic plans. To help keep this valuable information safe from falling into the wrong hands, Network Box USA now provides its managed security clients with a data leakage prevention software option.

The new DLP software works to curb the disclosure of sensitive information over a company's SMTP email system. It leverages Network Box's advanced antispam technology, the company says, and it won't slow down antivirus and antispam scanning performance on the same hardware.

Besides obvious items such as corporate credit card details and employee Social Security numbers, Network Box DLP can be configured to safeguard more abstract but no less confidential data, such as product roadmaps and intellectual property.

Network Box says that its DLP software can be implemented with highly detailed rules to enforce your company's policies on a per-user basis. Its dual engines, DLP_Rules and Policy_DLP, join with its advanced rules language for a high level of customizability, the company says. And it can be set to block particular attachments such as document files and compressed archives that have been encrypted.

Network Box Data Leakage Prevention Software
Highly customizable DLP software that can scan your company's email for sensitive and valuable information.

PUSH
PUSH TECHNOLOGY
WHY WAIT?

The new DLP option can work bi-directionally, so both outbound and inbound messages can be scanned for important data. Its scanning and enforcement phases are separated for maximum versatility in the overall package.

Network Box DLP may be of especial interest to financial institutions and other entities striving for regulatory compliance, says Network Box Chief Technology Officer Pierluigi Stella. It's available now to the company's managed security service customers.

NETWORK BOX

(832) 242-5758
www.networkboxusa.com

SECURITY PRODUCT SPOTLIGHT

Email Security Appliances

Product	Axway MailGate	Barracuda Spam & Virus Firewall	Fortinet FortiMail-100C
Description	Data loss prevention features join inbound and outbound protection in the Axway MailGate enterprise email security solution. MailGate is available as a hardened Linux appliance and can also be deployed in a VMware environment. It supports IPv6 out of the box, and it makes regulatory compliance easier, Axway says. • Antivirus: McAfee or Kaspersky engine-based virus protection with integrated policy controls • Virus outbreak protection: Zero-hour protection against new virus outbreaks with quarantining and notification options • Automatic updates with zero downtime • Integrated reporting and alert framework • Allows for policy-based disposition **Best For:** Enterprises looking for a comprehensive data loss prevention strategy combined with email security. **Price:** $5,300	The versatile, do-it-all Spam & Virus Firewall appliance from Barracuda Networks uses a multilayer approach to content filtering, with three layers dedicated to virus blocking alone. The Spam & Virus Firewall alleviates strain on the network and mail servers by winnowing out unwanted content ahead of time and performs full email scanning for both inbound and outbound email traffic. • Supports up to 100,000 users with per-user customer filtering policies • Available in eight models and as a virtual appliance • Speeds up recipient verification in Exchange and Domino environments • Protects against phishing and DoS attacks • Updates are provided by Barracuda Central, a 24/7 security operations center that continuously monitors and blocks the latest Web-based threats **Best For:** Enterprises, midmarket organizations, and service providers. **Price:** $699	The budget-friendly Fortinet FortiMail-100C email security appliance bears the brunt of spam and malware gatekeeping, freeing your small network from the burden of unwanted traffic. It can be deployed in a transparent mode or as a gateway or server. Automatic spam and virus updates, QoS, virtualization, and inbound/outbound SMTP routing combine to make one compelling package in this price range. • Processes up to 77,000 emails per hour with FortiGuard Antispam and Antivirus • 1TB of archival and quarantine storage • Basic-mode GUI and wizard-based setup facilitate ease of use • Licensed by device; no per-user pricing • High availability options available **Best For:** SME, SOHO, and remote/branch office. **Price:** $1,495

Product	SonicWALL ESA 3300	Sophos Email Security & Data Protection ES1100	Sophos Email Security & Data Protection ES8000
Description	SonicWALL says that its ESA 3300 email security appliance delivers performance and scalability that is powerful yet easy to manage for a company of any size. The ESA 3300 integrates SonicWALL's GRID (Global Response Intelligent Defense) Network, SonicWALL Threat Center, and SonicWALL Labs to apply continuous updates on worldwide threats over multiple vectors. SonicWALL's GRID Network includes millions of SonicWALL antispam and email security sensors deployed at sites worldwide. This integrated approach uses customer ratings of email, predictive behavioral analysis, and innovative malware identification signatures. In doing so, SonicWALL says, the ESA 3300 supplies proactive, near real-time, self-correcting defenses that block both malware and their carrier channels in advance of many malicious cyber attacks. • Advanced reputation management • Effective spam-blocking techniques • Patented phishing detection technology • Five-step quick configuration takes a mere 10 minutes • Compatible with all email servers • SonicWALL GRID Network Anti-Virus **Best For:** Organizations in need of superior inbound and outbound email security.	Dual-core processing power helps the ES1100 handle up to 200,000 email messages per hour. Fortified with DLP, message forensics, and anti-malware defenses, the managed ES1100 is much more than a spam blocker. It boasts active and passive two-unit failover capability along with Sophos' remote monitoring and round-the-clock support. • Supports user block lists and personal quarantines • Browser-based three-clicks-to-anywhere console allows management of up to 10 appliances simultaneously • Automatic, no-cost upgrades • Three-year advance replacement hardware warranty **Best For:** Small to medium-sized organizations looking for an integrated solution combining spam and malware protection with DLP and email encryption. **Price:** Starts at $3,295	The flagship ES8000 email security appliance from Sophos packs powerful features into a 1U rackmount chassis. A managed, remotely monitored appliance based on a hardened installation of FreeBSD, the ES8000 can be clustered for multisite or scaled use. Its Sender Genotype technology blocks most spam at the gateway, while its Behavioral Genotype feature guards against malware, phishing attempts, and other threats. • Data loss prevention technology and optional SPX encryption protect sensitive data • Processes up to 550,000 messages per hour • Redundant power supplies • Mirrored 300GB SAS hard drives • Quad-core processor **Best For:** Large organizations in need of a managed security appliance. **Price:** Starts at $13,995

Processor's Product Spotlight highlights options available in key data center product categories, providing product information side-by-side for easy comparison.

Compiled by Marty Sems

Fortinet FortiMail-3000C

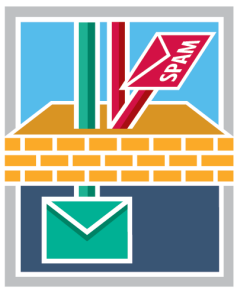
Twin Intel Xeon E5504 processors and 16GB of RAM make the Fortinet FortiMail-3000C one serious security platform. The new FortiMail-3000C works as a comprehensive SMTP mail server supporting POP3, IMAP, and even Web mail clients thanks to its new FortiMail 4.0 MR2 OS. Fortinet says the product is ideal for SaaS and application service providers with PCI DSS or HIPAA regulation compliance obligations. There's DLP, antispam, antivirus, and antispyware onboard, along with identity-based encryption for both push and pull delivery.

- Can sort 1.2 million emails per hour with FortiGuard Antispam and Antivirus
- 2TB of built-in RAID 1/5/10/50 storage; upgradable to 6TB
- Supports up to 50,000 users and 5,000 domains
- Dual Gigabit fiber (SFP) interfaces and four Gigabit copper ports

Best For: Medium-sized to large enterprises, carriers, and service providers.

Price: $29,995

SonicWALL Comprehensive Anti-Spam Service



The SonicWALL CASS (Comprehensive Anti-Spam Service) can be deployed over existing SonicWALL TZ, NSA, and NSA E-Class appliances running SonicOS 5.6.3 or later. It protects SMEs with inbound anti-spam, anti-phishing, and anti-malware technology, plus advanced sender IP reputation analysis, cloud-based content management, denial of service prevention, full quarantine, and customizable junk summaries by user. CASS outperforms RBL filtering, the company says, offering 98% effectiveness against spam. After blocking 80% of junk email at the gateway, the service then applies Adversarial Bayesian filtering on the remaining messages.

- Easy activation and configuration
- No MX record redirection necessary
- Features GRID Anti-Virus
- Interoperable with other email security systems
- Varied options for the routing of junk messages

Best For: Small to medium-sized businesses looking for email security that's easy to deploy and administer.

Vircom m150

The Vircom m150 antivirus and antispam device can extend its coverage to up to 2,500 users and unlimited domains. It is capable of working with network loads of up to 5 million messages on a given day. The m150 is powered by Windows 2003 Server with SQL Server 2005 Express, along with modusGate antivirus software. It's optimized for connectivity with Exchange Server 2003/2007/2010.

- Sequential Content Analyzer predictive technology stops zero-day attacks
- Intel Core 2 Duo processor
- RAID 1 storage drive mirroring
- Optional dual antivirus add-on
- Add-on option provides DLP and policy management

Best For: Midsized businesses, small to medium-sized ISPs, hosting and mail service providers.

Price: Starts at $5,045, including Windows Server license and 50-user Vircom modusGate software license.

Vircom mBlade

Big organizations have big needs when it comes to anti-malware protection. The Vircom mBlade provides both speed and capacity in this role, along with inbound and outbound email scanning, spam filtering, and power redundancy. The mBlade can handle up to 15,000 user mailboxes and any number of email domains. It's a turnkey system for high-volume, heavy security environments.

- Throughput of up to 17 million messages per day
- modusGate antivirus protection onboard
- Four Gigabit Ethernet ports
- Dual Intel Xeon 5130 dual-core processors
- RAID 5 data protection with 15,000rpm hard drive performance

Best For: Corporations, large enterprises, carriers, ISPs, hosting and mail service providers, and large universities.

Price: Starts at $22,950, including Windows Server license and 50-user Vircom modusGate software license

Do you have a NEW PRODUCT that data center and IT managers would be interested in learning about?

Send your press release or related product information to press@processor.com.

Is Deduplication Still The Best Choice?

New, Improved Ways Are Emerging To Manage Growing Data Stores

by Cynthia Harvey

• • •

Key Points

- In the coming years, enterprises will be creating massive amounts of data, and their current deduplication solutions may not be adequate.
- Faster, better deduplication solutions may offer part of the solution.
- Reducing the data at the application level can supplement deduplication and make it easier to handle the growing volume of data.

From the perspective of IT managers, running backups is something of a necessary evil. Companies absolutely must have backup copies of their data for both compliance and disaster recovery purposes, but creating those backups can take a long time and put a drain on system resources. Tape backups can be unreliable and difficult to manage, while disk backup is expensive.

Recently, disk deduplication has emerged as a popular way for enterprises to reduce the amount of data that must be stored and thus reduce associated costs. In fact, Robert Amatruda, IDC's research director for data protection and recovery, reports that in a survey of 170 North American enterprises, 47% said they used deduplication as part of their data protection processes. And among large firms with more than 5,000 employees, 78% had invested in deduplication technology.

Experts say that although deduplication is an important first step, it won't solve all of the problems caused by explosive data growth. IDC estimates that in 2009, humanity created and replicated about 0.8 zettabytes of data—enough to fill a stack of DVDs reaching to the moon and back. While that's a lot of data, at current growth rates, the digital universe will be 44 times as big by 2020. In that year, analysts predict that humans will create 35 zettabytes of data—enough to fill a stack of DVDs stretching halfway to Mars.

As their data stores grow exponentially, enterprises are beginning to look for new approaches that can augment their current deduplication methods. Fortunately, emerging technologies and new methodologies can further decrease costs and reduce the impact that backup and deduplication have on IT systems.

Faster, Better Deduplication

One approach to the challenge of data growth is to create faster, better deduplication technology. Mike Bollman, a product market manager for deduplication vendor Quantum (www.quantum.com), notes that a lot of software vendors are beginning to add deduplication features to their data protection suites. He says that's good because "customers are hearing how important deduplication is." But a lot of firms don't realize that "not all deduplication is created equal," he says.

Although many deduplication products offer data reduction ratios around 2:1, Bollman says the best deduplication technology results in reductions of 20:1 or 25:1, with a resulting 90 to 95% capacity savings. That means companies can spend less on storage arrays and fit more on the arrays they have. Instead of having two or three days of backup on disk and the rest on tape, enterprises can keep 30 to 60 days' worth of backup on a single storage array. As a result, many restores are much faster and easier.

Some deduplication products are also faster than others. According to Bollman, enterprises that examine all of their options may find that some appliances are as much as two times faster than their competitors. Because deduplication is a processor-intensive process, reducing the amount of time it takes reduces the burden on IT systems and makes it easier to manage the ever-growing pile of data.

Data Reduction At The Source

While better deduplication technology does offer many benefits, some experts say a new approach is necessary to address data growth. "From the perspective of data protection, data deduplication is necessary but not sufficient," says Peter Eicher, senior product marketing specialist at Syncsort (www.syncsort.com). "By itself, it solves some issues that you have, mostly issues around cost, but it's not going to solve all of the problems you have around data protection."

He offers this analogy: Imagine that you have a pile containing 1,000 bricks of 10 different colors all mixed together, and you need to make a pile containing one brick of each color on the other side of the room. One way to get the job done is to move the entire pile to the other side of the room and then sort out the duplicates. That's similar to the way traditional deduplication works. "The problem with that model when you look at it is that I'm still requiring my servers, my application environment, and my networks to essentially pick up and carry that data to that target," Eicher says.

Of course, the much more sensible approach in the brick analogy would be to sort out the bricks ahead of time and then just carry the 10 bricks you need across the room. According to Eicher, some backup products are beginning to incorporate these data reduction capabilities. They "track the data as it changes, so [you] don't have to go through this process of hashing through the entire data center every day," he explains. "When it comes time to run your backup, [you] already know what's changed." As a result, enterprises that used to require three to four hours to complete a backup can sometimes get the job done in as little as 10 minutes.

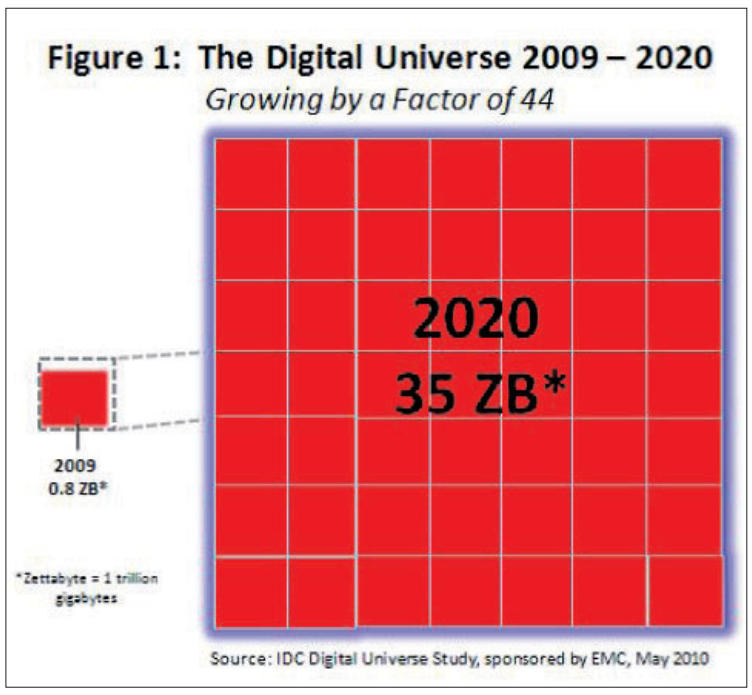
These data reduction methods don't completely eliminate the need for data deduplication. However, by using both data reduction and data deduplication together, enterprises can greatly reduce the strain that data growth puts on their systems.

Choose Wisely

Experts say that many companies will likely need a range of different technologies in order to help them deal with data growth. Amatruda notes, "I don't think there's any one magic bullet that's going to solve all of the issues around data growth."

He also cautions that IT shops are slow to adopt new backup and deduplication solutions. "At the end of the day, when you look at the way these IT shops run, it really doesn't lend itself to the adoption of the latest and greatest product or concept or company," Amatruda says. "Data protection is really a risk-averse activity."

For vendors, that means they'll face a significant challenge in getting their innovative new products into customers' data centers. For data centers, it means that when you do select new backup and data reduction solutions, you need to do so carefully. The solution you purchase today will likely be around for years to come, so you need to make sure you choose technology that will be able to deal with the exponential data growth your company will be experiencing. P



According to IDC, the world created and replicated 0.8 zettabytes—almost 1 trillion gigabytes—of data in 2009. At current growth rates, we will create and replicate 44 times as much data in 2020: 35 zettabytes.

STORAGE

SIX QUICK TIPS

Establishing A Tape Backup Replacement Cycle Or Policy

Keep Tapes In Top Condition To Maintain Data Integrity

by Chris A. MacKinnon

• • •

Tapes and tape drives have been part of robust and reliable backup plans for years. But there are common mistakes people make that can increase the chance of tape drive failure. However, if you establish a tape backup replacement cycle or policy, your tape backups should be reliable, last longer, and save you money in the long run.

Performance Means Everything

Sending data to tape drives today becomes a bigger challenge as drive technology increases in both capacity and throughput. Doug Cole, partner with LH Computer Services (www.lhcomp.com), says with LTO-5 rated at a line speed of 140MBps, it is often difficult to keep those drives spinning at a consistent rate. "It's important to avoid starting and stopping your tape drives," he says. "Implementing a D2D2T (disk-to-disk-to-tape) scenario can often improve this performance bottleneck and avoid extra stress to both the tape drives as well as the media, extending the life of both."

Tape drives have a specified duty cycle, which is an indication of the workload a drive can endure each day. According to Tim Willis, marketing manager at BackupAssist (www.backupassist.com), while a drive with a duty cycle of 100% may operate continuously with no ill effects, a drive with a duty cycle of 50% should not be operated for more than 12 hours a day.

"A simple way to gauge the reliability of a tape drive is to find out the MTBF (mean time between failure) as specified by the manufacturer," Willis says. "You should note, however, that the MTBF is usually specified at a certain duty cycle. For example, consider a Travan tape drive with a MTBF of 370,000 hours at a 20% duty cycle. The drive will only have an average of 370,000 hours between failures if it is run less than 20% of the time (about 4.8 hours per day). Running the tape drive for any longer will reduce the reliability of the drive."

Don't Underestimate Cleaning, Maintenance & Certification

Cleaning magnetic data tape definitely has its benefits. Eugene S. Hahn, general manager at Tri-Magnetics (www.tri-magnetics.com), says that using a cleaning blade can remove up to 95% of dropouts (data loss). "Burnishing also removes contaminants from the tape surface," he adds. "You can use contaminant removal on the oxide side and on the Mylar side. Also, when re-tensioning a drive, use two-pass cleaning from EOT (end of tape) to BOT (beginning of tape)." Hahn says because tape can shed debris, the contaminants or clumps of oxide can pose hazardous to the write and read heads.

LH Computer Services' Cole says that keeping the environment surrounding the tape library clean, including the regular replacement and cleaning of cabinet filters, is very important. "Dirt and dust particles that make their way into the tape path will only lead to problems," he says. "Regular scheduled cycling of your cleaning tapes through each drive is recommended. Follow the drive manufacturer's best practice schedules."

Hahn also points out the many benefits of a tape certification program. If a company wants to redeploy used tape to other departments or divisions, they can submit them to a certification program. Hahn says each tape is physically inspected for mechanical defects and is completely eradicated to erase the previous data, which will ensure an accurate write and read evaluation of the test pattern that is applied.

Consider Capacity & Quality

Tape drives use compression to fit more data on each tape. BackupAssist's Willis says some files, such as video and sound files, are, however, hardly compressible, so he says not to rely too heavily on the compressed capacity advertised when choosing a tape drive. "You should also choose a tape capacity that will allow for future data growth," he says.

According to Tri-Magnetics' Hahn, it's also important to grade tape into quality levels to determine the right allocation of a tape to its proper storage usage. "For example, a marginal error cartridge may be safely used as a scratch cartridge for limited use," he says. "And a higher standard should be expected from an offsite cartridge because a restore may be required from it after having been in storage for several years."

Archive & Monitor Tapes Regularly

BackupAssist's Willis says that as an added precaution, tape should be taken offsite periodically so that a backup always exists at a second location. "To meet legal compliance regulations, some businesses need to store many types of data (email, documents, financial records, patient medical records, etc.) for long periods of time," he says. "In some cases, information must be preserved indefinitely."

Willis says all good backup strategies should allow you to restore from the previous working day. "Sometimes, however, data loss may not be discovered for days or weeks after it occurs," he says. "Your backup strategy should allow you to restore data from previous weeks, months, and even years. This is best achieved by archiving some of your tape backups. Archived tapes are stored permanently, preferably offsite in a secure location, and are never overwritten. As a minimum, yearly and quarterly tapes should be archived, so that data will be available for many years to come."

According to Tri-Magnetics' Hahn, it is essential to monitor tape usage and error rates to determine the condition and reliability of the tape in use and, in turn, the need to evaluate or retire. "When an error becomes present, it is time to closely monitor the tape or transfer the data and submit the tape for evaluation and certification service," he says. "This service determines the historical data of each tape and the condition before the tape undergoes eradication, cleaning, and certification. Not only will this type of service determine the current condition of the tape, but also the ability to accurately write and read to the tape without one data mismatch." P

Most Sensible Tip:

Create A Multilevel Backup Strategy

When it comes to data protection, don't keep all your eggs in one basket. Tim Willis, marketing manager with BackupAssist (www.backupassist.com), says a multilevel backup strategy can prevent several problems. First, because tapes wear out, don't rely on a single backup. Second, make sure your window of coverage is large enough; most people only notice data loss days after it occurs. Finally, don't rely on a single local backup. Should your primary backups be destroyed, having copies of critical data offsite (e.g. in the cloud) means you always have access to your data.

Best Tip:

Choose The Right Media

There are many options to consider when selecting media for your tape library. Doug Cole, partner with LH Computer Services (www.lhcomp.com), says experience has proven that selecting cheaper, less expensive brands of media tends to lead to more retries and I/O errors. "Always shop pricing," he says, "but often simply selecting the lowest cost media will lead to more headaches and less dependable backups or archives."

BONUS TIPS

■ **Use the right transfer rate.** Tim Willis, marketing manager with BackupAssist (www.backupassist.com), says that if data transfer to the drive is considerably slower than the drive's data transfer rate, the tape drive will suffer from start-stop motion as it waits for more data to arrive. It's easy to imagine the wear and tear this places on the tape, and how the integrity of data on the tape can be severely degraded.

■ **Handle and store your tapes properly.** Be careful not to drop tapes when carrying them, and store tapes in a sturdy, fireproof safe to keep them out of harm's way, Willis says. When operating tape drives, keep them away from carpets and other sources of contaminants.

FEATURED COMPANY

Stop Trashing Your Tapes

WeBuyUsedTape Offers Experience, Security You Can Trust

Even though the practice of recycling magnetic tape media for reuse has been around for almost 40 years, most companies are unaware of this option—or afraid it is not safe or doesn't conform to their policies or industry's regulations.

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How long have you been providing this service? We are a family owned, third-generation operation and have been recycling and recertifying media for more than 30 years. We have operated from the same facility for more than 20 years.

What will happen to my tapes? All data eradication is done at our Rancho Cucamonga, Calif., facility. We are not brokers who sell media to the highest bidder. Every tape is eradicated, regardless of whether it passes certification.

Is my data safe? Data is destroyed using manufacturer-approved processes, ensuring your security and confidentiality. Data destruction certificates and non-disclosure agreements are available at no charge.

How do we conform to new laws and regulations? Our processes are fully compliant: HIPAA, Sarbox, Gramm-Leach-Bliley Act, USA Patriot Act, Homeland Security Information Sharing Act (Federal agencies security information), FDA, SEC, Utility Commission, and others.

Why don't we just throw away our tapes? Would you throw your computer in the trash without deleting sensitive data? Our processes increase data security, eliminate viruses and corrupt data, help conform to privacy and storage laws, restore many tapes back to original condition, improve recording performance, and save money and the environment at the same time.

Why do most companies not eradicate their own media? MONEY! Most companies do not want the added cost of expensive equipment and additional labor costs. We provide an easy and economical way to reduce costs and recycle efficiently.

How do we get paid? Be careful of brokers and here-today, gone-tomorrow organizations. We purchase millions of dollars worth annually. You can get a cash buyback or a credit buyback to purchase new tapes, equipment, and supplies. Or, choose the charity of your choice and donate the value.

Do your homework. We can provide industry-specific references. Our family is proud of what we do and we stand by our processes and products 100%.

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Consumer Wireless In A Corporate Environment

Corporate Risk & Liability Are Just The Tip Of The Iceberg

by Julie Knudson

• • •

Many employees now see wireless network access as a must-have, something that directly contributes to their productivity and efficiency. If your organization doesn't have a wireless network—or has a network with insufficient coverage or prohibitive security policies—it's likely that you'll eventually encounter unauthorized ("rogue") employee-installed wireless access points. From the end user's perspective, his problem has been solved; he now has wireless network access where before he did not. But for the enterprise, the problems are just starting.

Know The Risks

Rogue access points can create huge network security holes. "If you have your wireless open, such as having an employee bring their own wireless access point, it's kind of like getting onto the Internet without a firewall," says Chia-Chee Kuan, CTO and co-founder of AirMagnet, part of Fluke Networks (www.airmagnet.com). "Everybody can get in, and then they can poke around employee desktops, your servers, your data center, everything." Kuan explains that unsecured network access can lead to unwelcome corporate liability. "When you're sharing your network with unknown visitors or neighbors or hackers," Kuan says, "they can leverage your network to the Internet and do any sort of thing that you may be liable for." Activities can range from illegal music downloads to launching an Internet attack against a sensitive government Web site.

Additional difficulties can arise when user-provided devices interfere with the rest of your network. "Users coming into an environment will oftentimes have no idea that introducing another device may be a problem," says Bruce Miller, vice president of marketing at Xirrus (www.xirrus.com). "The user's device could cause technical challenges in terms of competing for bandwidth or spectrum and cause issues with the existing design."

Key Points

- Be aware of the security risks that accompany rogue consumer wireless access points.
- Don't trust consumer-grade encryption to keep your network secure.
- Proactively look for unauthorized devices, even if you don't think you have them.

Don't Rely On Passwords Or Encryption

Although passwords are a good, basic security tool, they typically won't make rogue access points completely secure. Chances are good that your enterprise has higher security standards than those supported by the majority of consumer-level network devices, so users savvy enough to use a shared password to connect are still opening a less-than-secure hole in your network. "Even if they have some kind of password on it, it might not be at the level of security standards that your enterprise is looking for," says Kiren Sekar, director of marketing at Meraki (www.meraki.com).

Consumer-oriented devices also commonly lack the encryption technology required by most enterprises. "The problem with consumer-level access points is they don't have strong enough security," Kuan explains. "Even for the user who is really conscientious about authentication and encryption, if they're using [a consumer device] to hook up to your enterprise network, the strongest connection, which all IT departments use today, will require backend infrastructure." Users that connect these devices to the corporate network often feel they're providing sufficient security, but in reality they aren't meeting the enterprise's basic needs.

Find & Block Rogue Access Points

Think your network doesn't have unauthorized access points? Think again. "If you don't look for it, you probably don't even know it's there," Kuan says. "Because it's wireless, it could be hidden any place." Until an enterprise puts some effort into looking for rogue devices, it is often unaware that its employees are surreptitiously connecting to the network and providing uncontrolled wireless access.

Rogue devices can be located in a couple different ways. The IT staff might walk through the building every few days or weeks using software to scan for unauthorized access points. More robust systems can automatically detect rogue connections and alert system administrators. Cost and time are two factors that will likely push you toward one solution or the other.

Once you've located an unauthorized access point, working directly with end users to remove it is a good first step. If user education doesn't address the issue, options exist to block the device from the network side. One solution is to implement a system that shields unauthorized radio frequencies. Beware, though, that these technologies may be too far-reaching. "They can also cause a lot of complications with neighboring organizations," Sekar says. "They might accidentally shut down your next-door neighbor's wireless network."

Some data centers instead choose to disallow rogue devices individually. "One option is to go back through the wired infrastructure, find where the device is plugged into the network, and disable that port," Miller says. "That doesn't kill the RF signal, but at least the security hole is plugged because people can't access the network through it."

Good Network Design & Solid Wireless Coverage Are Critical

The simplest way to avoid rogue access points is to deploy a corporate-sanctioned wireless network. Cost and support issues are often cited as obstacles, but organizations that balk should consider the consequences. "How expensive would it be if the problem goes unaddressed and your entire network is compromised?" Sekar asks. "If you look at the long-term costs, it's going to be less expensive to deploy a sanctioned wireless network than to deal with the consequences of having your company hacked."

While experts agree that providing a wireless network will eliminate the majority of rogue access points, they're also quick to add that it's not likely to completely eradicate them. Cumbersome network access, such as configuration of security certificates or a lack of enterprise-supported devices, can also lead to problems. "Even though the enterprise has a wireless infrastructure set up, the employee has a hard time getting onto it; therefore, they bring their own," Kuan says. "It's the most convenient way for them to do it, not knowing they're posing a security threat to the enterprise's wireless network."

Poor wireless coverage and improper network design might also prompt employees to find a workaround. "If you're going to deploy Wi-Fi, do it right," Miller says. "Do it ubiquitously and provide enough signal everywhere. If you design it right, then you won't have these issues and people won't bring in rogue access points in the first place."

Are You Still Compliant?

Compliance with regulatory mandates often hinges on your organization's network and data security practices. "Embedded in some of those types of compliance requirements is having a network that is sound and secure and can't be hacked," says Bruce Miller, vice president of marketing at Xirrus (www.xirrus.com). Recent press coverage of instances involving compromised information such as credit card and Social Security numbers demonstrate the type of sensitive data that could be at risk.

Unauthorized access points rarely adhere to the security levels required by compliance mandates, potentially putting your company's compliance in jeopardy. "If you're in a healthcare environment, for example, you may no longer be HIPAA-compliant," says Kiren Sekar, director of marketing at Meraki (www.meraki.com). "If you're in a retail environment, you may no longer be PCI-compliant." Rarely are users purposely trying to flout regulations, but their actions could ultimately result in business-stopping consequences.

FEATURED PRODUCT

A Hotspot-In-A-Box

4ipnet Product Package Offers Power, Security

by Andrew Leibman

• • •

So your company wants to set up a hotspot, either for an additional revenue stream or as free service to your customers or visitors. You know it's as easy as adding a wireless router to your existing network, but that brings a host of concerns about private data and the security of your customers' data. Adding a hotspot the right way takes time, but 4ipnet's HSG200 Wireless Hotspot Gateway simplifies the process.

The HSG200 and the Network Ticket Generator Kit combine a powerful and secure 802.11b/g/n and 2x2 MIMO wireless module (complete with PoE capabilities) with 4ipnet's Smart Device Server 100 (SDS100) and the PRT100 PoS printer.

Once installed and configured, simply press a button on the SDS100 to issue temporary guest logins that expire after a set amount of time. Customers, visitors, and business employees can rest assured they are browsing safely without risk of common public hotspot attacks such as password sniffing and DHCP spoofing.

Press & Connect

The HSG200 Wireless Hotspot Gateway is ideal for medium-sized hotspots in convention centers, coffee shops, restaurants, libraries, shopping malls, hotels, and more. Special 4ipWES (Press-n-Connect) technology lets users establish a Wireless Distribution System link between the HSG200 and up to two additional access points for greater range.

4ipnet's Web-based configuration utility is easy enough that even non-technical users can configure the network and create multiple pricing plans, for instance a half-day plan and another all-day plan, both with dedicated pricing. At the point of sale, users can select the appropriate plan using the up and down arrows on the SDS100 and then press Enter to print out the access ticket. The kit also lets you determine the Web page users will see upon login.

4IPNET HSG200 WIRELESS HOTSPOT GATEWAY

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www.4ipnet.com

When combined with the Network Ticket Generator Kit, Smart Device Server 100, and PRT100 PoS printer, organizations can quickly set up a secure public or private hotspot for customers or visitors.

4ipnet®

FEATURED PRODUCT

One-Stop Cloud Shop

Runaware's Platform Makes It Easy To Deploy Applications In The Cloud

by Seth Colaner

• • •

There are plenty of cloud vendors that offer storage space in the form of virtual machines, including those backed by trusted names in the business. But although hosted storage space has its appeal for ISVs (independent software vendors), those ISVs are still required to do everything else that's required to launch and manage an application—porting their applications to the appropriate platform, figuring out how much to charge per seat for their offerings, and so on.

It's like renting office space in an empty building; sure, the building may hold plenty of promise, but you, the renter, have to furnish the place, from desks to computers to printers to potted plants. Before you get to your core business, you have a lot of additional work to do.

To follow the cloud service provider analogy, if cloud storage vendors are the above, then Runaware provides the office space and all the amenities, so you can get to work as soon as you sign the lease.

Full-Service Operation

Many people know Runaware for its flagship TestDrive platform, which allows ISVs to launch an online demo of their products to see how they will act in the cloud under various conditions. However, Runaware's cloud platform offers much more in the way of hosting SaaS applications.

Runaware lets customers bring it an application, and after Runaware does its own testing and benchmarking to determine the resources the application will need and how much that would cost, the company launches the application in the cloud for the client. Then, Runaware configures and manages everything, including updates, upgrades, and even end-user support if necessary.

"The idea is that rather than having to re-code their applications for a particular cloud platform or to make it a Web application, we can just go in and take it as is and host it in the cloud," says Andy Poulter, Runaware's CTO. "It could be live in a couple of months on SaaS."

Throughout the process, Runaware functions as a partner with each client, advising them about the best approach to launching a product, how to set pricing, and more.

Another benefit of Runaware's cloud platform is that the client can choose where the application is hosted, meaning clients can opt to have Runaware host their products through a third party or in Runaware's own data centers in North America, Europe, and Asia. "We're a small company, and we feel that some companies might feel more comfortable being hosted on a cloud that's hosted by a known company that's also available in many locations and data centers," Poulter says.

Who It's For

Runaware's cloud platform is ideal for any ISV that is selling business software aimed at the corporate world, be it financial, accounting, tax software, productivity software, or something else; SMEs without large IT departments can also benefit from the ability to offload their SaaS deployment needs to Runaware and forget about it.

Not only does that remove a great deal of work from those ISVs and SMEs, but by leveraging Runaware's cloud platform, they can easily control and keep track of their per-seat costs, too. Because Runaware helps them determine their costs before launching their product in the cloud, companies can be sure the pricing remains static, unless they add functionality or seats.

Runaware's cloud platform is designed to make launching applications in the cloud as customizable and easy to do as possible. "It's really all about making it simple, both for the ISV and for the customer they sell it to," Poulter says. P

> "Rather than having to re-code their applications for a particular cloud platform or to make it a Web application, we can just go in and take it as is and host it in the cloud."
>
> *- Runaware's Andy Poulter*

Runaware Cloud Platform

www.runaware.com

Description: A cloud hosting solution that provides users with all the tools needed to quickly and easily deploy applications in the cloud.

Interesting Fact: Although Runaware has its own data centers in North America, Europe, and Asia, its customers can opt to have their applications hosted in a different geographical region or with a third-party storage service.

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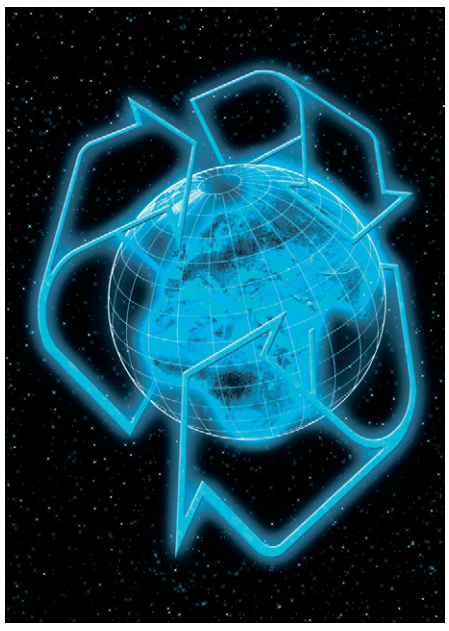
News

More Companies Outsourcing Data Storage

In the name of cutting costs, more businesses (about half now) are interested in outsourcing storage of their sensitive data in other countries. So says a recent Vanson Bourne survey



of international IT decision-makers conducted on behalf of McAfee and Science Applications International Corp. Respondents perceive countries such as China, Russia, Israel, and India as being riskier than the United States from a data security perspective. Vanson Bourne points out that companies actually seem to seek out countries with weaker data breach disclosure requirements—about eight in 10 respondents admit that disclosure laws factor into their outsourcing decisions.

Revenue Increase Points To Possibility Of Tablets With Cameras

Largan Precision Co., based out of Taiwan, announced that its 2011 first quarter saw a 52% leap in revenue compared to the year earlier. This uptick was created primarily by an increase in camera lens orders placed by tablet manufacturers. Although many first-generation tablets were built without a camera, it will be the norm for new tablets to include at least one camera. New orders placed at Largan Precision are for lenses that would support a resolution up to 5 megapixels. The tech market expects the production of tablets with cameras to increase for the rest of this year.

IEEE OKs New WiMAX Standard

The IEEE (Institute of Electrical and Electronics Engineers) rubber-stamped the latest evolution of WiMAX, IEEE 802.16m, which could support downstream speeds in excess of 300Mbps. The standard, also known as WirelessMAN-Advanced or WiMAX-2, is seeing stiff competition from LTE (Long-Term Evolution), which is a similar technology but has the backing of a different standards body. Features that help the new revision outstrip its predecessor include MIMO (multiple-in, multiple-out) technology that uses multiple antennas to send and receive simultaneous data streams.

Satyam To Settle U.S. Fraud Charges

To settle financial fraud charges, Satyam Computer Services will pay a $10 million penalty to the U.S. Securities and Exchange Commission. In 2009, company founder B. Ramalinga Raju admitted to inflating company earning statements, and the Indian government took over the company. Criminal charges have also been filed against Raju and several other former company executives. According to the SEC complaint, former Satyam managers created more than 6,000 phony invoices to be used in the company's general ledger and financial statements and also created bogus bank statements to reflect payment of the sham invoices. In addition to paying the penalty, the company agreed to train employees and improve internal audit functions.

SERVICES

HOW TO

Choose An Outsource Provider

Introspection & Research Drive The Effective Search

by Christian Perry

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Constantly keeping pace with daily hardware, software, networking, security, and mobility demands is no small feat, but there's always an outlet in the form of outsourcing. Hiring an outsourcer can deliver the opportunity to focus on IT goals that are crucial to business strategy, rather than tasks that draw away from the business core. Of course, the potential for savings is also a big part of moving parts of IT to an outsourcing team.

Key Points

- Identifying your outsourcing needs and how they relate to business goals is a critical first step in finding the right outsourcing provider.
- Outsourcing providers should be screened through your own evaluation and research of the provider's reputation in the field.
- Make sure the provider has plenty of resources behind the face that's selling the service to ensure you're not left in a bind if your sole contact is unavailable.

"The biggest benefits are that businesses can often reduce overhead costs and gain access to IT skill sets that they don't already have," says Peter Argumaniz, CTO and head of product marketing at Fujitsu America (solutions.us.fujitsu.com). "A sometimes overlooked but very critical benefit is that outsourcing providers have mature standards and processes for handling IT and dealing with the unpredictable."

However, the benefits offered by the outsourcing route aren't always a given, particularly if an organization hasn't performed the necessary research before choosing an outsourcer. Here's a look at what's involved in the process of choosing an outsourcer and how to make the best fit for your business.

Look Inside

According to L.N. Balaji, president of U.S. operations for ITC Infotech (www.itcinfotech.com), organizations should first explore why they would like to outsource, adding that it's critical to look at outsourcing as a strategic move that will be bring continuous value in the long term, rather than a temporary tactical decision. Part of that strategic move is understanding where your priorities lie, especially as they relate to business goals.

"Before choosing an IT outsourcing provider, organizations should clearly define their business objectives, rather than just their technical requirements," Argumaniz says. "More than 90% of the time, I've seen situations where the RFP [request for proposal] was not aligned with the business goals, which can lead to substantial cost increases. Think in advance what you most need to solve. By how much do you need to reduce costs? Is compliance a top priority?"

The best outsourcing providers, he adds, will work with customers to align the outsourced service to its business objectives and deliver a comprehensive assessment of current assets, capabilities, and needs. Of course, not all outsourcing providers will go to this extent, but that doesn't mean those providers don't provide a good outsourced service. In some cases, it can be best to seek outside help before seeking outside help—that is, bring in a consultant to help assess your outsourcing needs.

"It is important organizations know what they want to potentially outsource before contacting providers; otherwise, they may be talking to the wrong providers," says Scott Staples, president for Americas at Mindtree (www.mindtree.com). "Companies that get it right typically hire specialty consulting companies prior to contacting outsourcing companies. These consulting organizations can help define the strategy, do a portfolio analysis of their applications and which ones make sense as outsourcing candidates, and finally they can build a roadmap for companies to follow."

Also, don't forget about networking to help ease your entry into outsourcing. For example, in cases where outsourcers provide manpower and technical sources, it's as important for the provider to be recommended by another business or acquaintance as it is for the provider to be technically savvy, says Joseph Pedano, vice president of data engineering for Evolve IP (www.evolveip.net). Further, if your company works with a hardware vendor, Pedano says it's a good idea to ask the vendor for a recommendation for a local provider, because those providers will usually be certified to service that hardware, among providing other valuable services.

Screening Time

Once business goals are defined and the reasons for using an outsourcing provider are identified, it's time to narrow potential providers to a small number. Determining which provider will be the best fit depends on several factors, including how effectively the provider will be able to accommodate your needs. Naturally, the provider should be at the top of its game in terms of the technologies it handles—and have proof that it is.

"The provider should be able to demonstrate the value of their services as well as provide technical resources in the presale process that can answer advanced technical questions on applications and provide a roadmap for upgrades and enhancements to current systems. While most prospects ask for referrals, very few prospects reach out to those referrals to ask about their experience with the provider. This is probably the most important part of the selection process, as having a good relationship with an outsourcing provider is as important as their technical prowess," Pedano says.

Experts recommend bringing in several potential providers and screening them as thoroughly as possible. Can they handle all of your technical requirements? What technologies do they use? What days and hours are they available? Are these days and times flexible? How would they handle changes in your organization if management decides to change technology directions? In addition to finding these answers, it's still up to you to ask around about the provider's ability to follow through on these issues. Along with asking colleagues, it's a good idea to jump on the Internet and browse through forums that discuss experiences with the outsourcer, says Mark Gilmore, president of Wired Integrations (www.wiredint.com). And don't neglect the fine print.

"Most important, get a look at the contract and SLA [service-level agreement] prior to signing with them. Contracts and SLAs say a lot about a provider's ability to service you. Make sure it is not written entirely in the favor of the provider, as many SLAs and contracts are today," Gilmore says.

Watch For Pitfalls

Your success with choosing an outsourcer rests almost entirely in your hands, so it's wise to watch for potential pitfalls. For example, Pedano advises that customers watch out for the "one-armed paper hanger," or a provider that's a one- or two-man business without much support behind it. If your assigned technician takes a weeklong vacation, you're up the creek if there aren't any backup personnel. Further, if there is no help desk, you're similarly in trouble when problems arise.

"[Another] pitfall I see is engaging a provider that is selected for an in-house application specialization for your business, but then struggles to support the rest of your applications," Pedano says. "Make sure your provider is well-rounded and able to support most, if not all, of your internal applications."

Finally, keep a close eye on change orders, Fujitsu America's Argumaniz warns. Change orders can be required when your business doesn't clearly define its solution requirements or assess its own assets and capabilities. Unfortunately, change orders can quickly double the price of a project, but Argumaniz says they can be prevented with the right outsourcing partner, clear definition of business goals, and an accurate situation assessment. P

TOP TIPS

Finding the right outsourcing provider depends heavily on the provider's ability to meet your organization's specific needs. L.N. Balaji, president of U.S. operations for ITC Infotech (www.itcinfotech.com), offers the following tips for identifying the perfect provider.

- Ensure the vendor will bring in a substantial quantitative benefit of cost savings.
- There must be a match in the organizational culture of both your company and the vendor.
- Ensure the vendor is reliable. Good governance, transparency, low attrition, and financial stability are good indicators here.
- Confirm the vendor has a proven track record of excellence in its area of service and can be trusted as an advisor in its field.

FEATURED SERVICE

Intelligent Equipment Disposal

Apto Solutions Gives Enterprises A Responsible, Secure Way To Deal With Decommissioned Hardware

by Nathan Lake

• • •

Apto Solutions is an expert at dealing with decommissioned, excess, and off-lease hardware. It offers secure and compliant disposition services for surplus equipment and gives companies a nice return on their investment for the products that it can remarket. Apto has experience with all types of equipment, including notebooks, network hardware, telephony, servers, and storage devices.

Apto Solutions

(855) ASK-APTO
www.aptosolutions.com

Apto Solutions is a comprehensive provider of asset value recovery and disposition services that aims to get enterprises the most return on their hardware investments.

The company ensures zero-landfill disposal and provides clients with downstream reports and certifications of destruction to ensure environmental responsibility and regulatory compliance.

"Apto strives to develop sustainable initiatives that will protect and maximize the recovery value of the organization's assets," says Tim Farrow, Apto's senior vice president of operations.

"When there's equipment that's reached the end of its life with a company, there are a lot of different avenues for the company to take," says Tim Farrow, senior vice president of operations at Apto Solutions (www.aptosolutions.com). "With the rise in data security threats, environmental awareness, global laws and regulations, and corporate oversight, it's more important than ever to have a plan for your used hardware." Apto has been an IT asset disposition company for 10 years, and it has ongoing asset recovery contracts with some of the world's largest corporations.

Maximize Your Return

According to Farrow, using Apto's services is a smart financial choice for enterprises. "We can help companies maximize their purchasing opportunities by turning idle assets into performing assets through our Apto Dollars program—where a company can send us unneeded equipment, we create a fund, and the organization can dip into the fund whenever they need a new purchase," he says. Apto will perform a portfolio analysis wherein it provides a low-to-high estimated resell value, which can help admins make business decisions about the hardware. For transparency and accountability, Apto inventories all sales reports through a real-time portal that includes asset specifications, target pricing, and sales history.

In some cases, it may make more economic sense to repair or reconfigure the equipment, and Apto's full-service lab can perform the repair. Customers can also redeploy assets back into their infrastructures if they find that the assets are needed after they've been sent to Apto. "Apto strives to develop sustainable initiatives that will protect and maximize the recovery value of the organization's assets," Farrow says. "We also align our goals with our clients, because we feel that it's the best way to develop a relationship between us and our clients."

Recycle Responsibly & Compliantly

Companies with environmental concerns need not worry about their assets when working with Apto. "Apto manages the downstream materials process to the final destination or smelter, which is different from most other product recycling companies," Farrow says. Clients receive an audited downstream report and, if necessary, certificates of destruction; the company also maintains a detailed record of any recycling activity for seven years. Apto partners only with companies certified by e-Stewards and R2 recycling to ensure zero land disposal, so you'll know that the extra hardware won't be filling up a landfill. Apto indicates that about 77% of its clients' equipment is resold as working units or sold for parts, and 23% is recycled separately.

Apto's asset disposition services are also compliance-friendly. Apto performs data wiping, resets, degaussing, and destruction at its facilities, and the company can perform global deinstall, reverse logistics, and data sanitization at clients' sites. Apto follows the Department of Defense's standard sanitization procedures for all types of data storage. "We're audited by our clients and independent auditors on a monthly basis," Farrow says. "Apto is ISO-9001, 14000-1, [and] 18000-1 compliant, and there's also a full-time compliance officer, so we take security very seriously." The full serialized reporting is viewable within AIMS Portal, and video testimony is also available.

For decommissioned assets that are resold outside the country, Apto has a compliance program that properly classifies your products with a Schedule B or Harmonized Tariff Schedule, as well as by whether it has an Export Control Classification Number. Apto will also screen the product against the U.S. Export Administration Regulations.

Products For Resale

For companies that don't need the latest and greatest in technology, Apto's Marketplace is a great place to check out because it offers surplus new or used, tested, and warranteed equipment. "Whether we're selling a server, a PC, a switch, or anything, we can help a company save around 50% vs. the cost of a new product," Farrow says.

Apto's product knowledge and experience can also help to select a product that's right for you and your budget. Equipment comes with a full warranty and includes next-day replacement parts. Additionally, customers that would like to customize their hardware can select from fully customized configurations. P

NEX Computing Solutions NEX 1U Server For Dealers & Resellers

NEW PRODUCT

by Kris Glaser Brambila

All The Power At A Quarter The Size

NEX Computing Solutions' NEX 1U server can handle a variety of applications, making it an ideal fit for small and medium-sized businesses. Its 1U, 20-inch-deep form factor is four times smaller than typical servers but sports the same speed and performance, says Bob Canning, Customer Solutions Engineer at NEX Computing Solutions.

The NEX 1U has a 2.93GHz Core 2 Duo E7500 processor, 2GB of DDR2 PC2-6400 (800) RAM (up to 8GB), and a 1TB SATA hard drive. It can be preloaded with various embedded operating systems, including Windows XP, 7, and Server 2008. "On the 1U and our other products, NEX Computing Solutions offers embedded operating systems from Microsoft, including Windows XP Pro for Embedded Systems, that allow the customer to have access to this platform for 10 or more years," Canning says.

The NEX 1U has a specialized riser card that accommodates full-length PCI cards, so you can use your existing hardware. "The majority of PCs that are sold today only have PCI-E slots," Canning says. "Many ISVs and board manufacturers do not wish to re-engineer their solutions to be compatible with newer I/O technology because the cost and return on investment is prohibitive. With the NEX 1U specialized PCI-E-to-PCI bridge riser, customers can continue to use their legacy products," he says.

NEX Computing Solutions NEX 1U

A 1U rackmount server featuring a specialized riser card that accommodates full-length PCI cards; it's ideal for telephony, industrial control, or video input applications.

Starts at $1,295

Other features include dual Gigabit Ethernet ports, the ability to add hot swap RAID level 5 SATA hard drives, and a slimline DVD±RW drive.

NEX COMPUTING SOLUTIONS

(855) 355-9252
www.nexedge.com

American Portwell CAR-4010

NEW PRODUCT

by Kris Glaser Brambila

Modular Rackmount Servers Customized Your Way

American Portwell's CAR-4010 is a modular 1U rackmount communication appliance designed for network security applications, including firewall, VPN, IDS/IPS, and UTM, and for network management applications such as routers, gateways, and QoS.

The CAR-4010 features a modular design that can help companies maximize cost savings, says Mark Huang, senior product marketing manager at American Portwell. "We wanted to include as many options as we could in this product," he says. Customers can select the components that are best suited for their business. For example, the CAR-4010 includes a 3.4GHz Intel Xeon E3-1275 processor, a 3.1GHz E3-1225 processor, or a 3.3GHz Intel Core i3-2120 processor. Users can install up to 16GB of dual-channel DDR3 1333/1066 memory and up to two 3.5- or 2.5-inch SATA HDDs or SSDs.

For expandability, the CAR-4010 has eight GbE RJ45 ports or four GbE SFP + 4GbE RJ45 ports; two USB 2.0 connections in the front of the chassis; a single PCI-E x8 port for proprietary interfacing; and one PCI-E x16 port for standard interfacing and use with Portwell's ABN and NIP network interface cards. Customers can also choose between a 250W 80 Plus full-range ATX power supply; a 275W redundant power supply; or a 250W DC48V input.

American Portwell CAR-4010

A modular, 1U rackmount communication appliance designed for network security and network management applications.

Regarding the CAR-4010's modular design, Huang says "…our customers have at least three choices for system placement: the basic configuration; a daughtercard connected via built-in PCI-E x8 Golden Finger; or their own third-party card."

Portwell

(877) 278-8899
www.portwell.com

SERVERS

FEATURED PRODUCT

Server Chassis Offer Power, Flexibility

New Options Showcase Chenbro's Cutting-Edge Experience

by Blaine Flamig & Rod Scher

• • •

When considering the purchase of a new rackmount server chassis, the pedigree of the chassis' manufacturer probably doesn't rank nearly as high on your checklist as do more practical considerations such as how many drives the chassis supports or the power supply configuration being used. Still, the experience and reputation of the company behind the chassis says a lot about the features, construction, and overall quality you should expect—and also about the level of overall satisfaction you can expect from the vendor.

In the case of Chenbro (www.chenbro.com) and its new series of server chassis (including the RM137 1U Server Chassis, RM235 2U Storage Server Chassis, RM417 4U High Density Modular Storage Server Chassis, and RM418 4U Modular Storage Server Chassis), you can expect a lot: 30 years of industry-leading and cutting-edge enclosure experience culminates in the design and execution of products you can count on to perform efficiently in every environment, and at a price that's easy to swallow.

The reason for that is simple, say company spokespersons. The company lets the customer's needs and expectations drive its business.

"Our goal is to always meet and exceed our customers' expectations. Consistently delivering flexibility, scalability, and world-class quality enables us to surpass the competition," says Linda Chen, General Manager of Chenbro Micom, U.S.A.

Innovation & Know-How

Chenbro Micom has been building PC cases, pedestal servers, and rackmount chassis since 1983 and has devoted much time, energy, and resources to R&D, an approach that consistently leads to innovative product design and quality improvement. This attitude has helped the company maintain its competitive edge and secure its market leadership.

Based in Taiwan and Taipei but with subsidiaries in the United States, Europe, and Asia, Chenbro is credited with creating the first tower PC in 1986 and also with introducing the removable motherboard tray—an innovation long appreciated and now taken for granted, but one that was considered a masterstroke at the time. The flexibility built into the RM137, RM235, RM417, and RM418 chassis is readily apparent: Each chassis features a modular design that makes maintenance chores and other tasks far less taxing, and it saves time and money when you're trying to come up with the exact configuration your data center requires.

The RM235, for example, offers up to six different hot-swappable drive configurations, including eight 3.5-inch, 12 3.5-inch, 16 2.5-inch, or 24 2.5-inch hard drives via a standard backplane and 12 3.5-inch and 24 2.5-inch hard drives via an expander backplane solution. The RM417 has a modular motherboard carrier and a modular HDD cage design that allows for various configurations, including front access to 24 3.5-inch or 48 2.5-inch hard drives and rear access to 12 3.5-inch or 24 2.5-inch hard drives. As with the RM417, the RM418's modular features include a front-accessible HDD cage (24 3.5-inch or 48 2.5-inch hot-swappable drives or 40 2.5-inch drives with slim optical drive) plus modular backplane installation abilities.

Each chassis also includes the ability to recycle the drive cages or chassis bases for building new configurations, and they feature hard-tooled construction, adding to their overall quality.

Here's a more detailed look at each of Chenbro's new server chassis:

RM147

RM235 / RM418

RM137

RM137 1U General Purpose Server Chassis. A basic all-around unit, the RM137 measures 1.7 x 16.9 x 26 inches (HxWxD) and supports EEB or 13- x 13.68-inch motherboards. It includes 2-bay and 4-bay 3.5-inch designs and optional brackets for two internal HDDs and a slim-ODD. Featuring tool-less slide rail support, the RM137 also offers support for a standard rear window, two front-mounted USB 2.0 ports, a single 1U PSU, seven 4048 swappable middle fans, and a Mini-SAS 4-port 3.5-inch backplane (6G). The RM137 also provides support for an optional 2-port SATA2/SAS BP (3.5-inch) with a dummy tray. Front-mounted LEDs indicate power, failure, and LAN status, and a front-mounted control switch offers On/Off, Reset, and Mute functions.

RM235 2U General Purpose Server Chassis. Supporting ATX motherboards, the RM235 series (3.5 x 17.5 x 27.5 inches) includes the RM23508, RM23512, and RM23524 models. Featuring a tool-less design and an easy-to-assemble fan bar that reduces vibrations, the models offer support for a low-profile or standard rear window, two USB 2.0 ports on the front, an intrusion switch, 620W (RM23508) and 820W PSUs (RM23512 and RM23524), three 80mm hot-swappable middle fans, three full-height or seven low-profile slot openings, and a Mini-SAS backplane (6G). A 3G or 6G SAS expander card is available as an optional add-on.

RM417 4U High Density Modular Storage Server Chassis. The RM417 (model RM41736) supports ATX, extended ATX, and CEB motherboards and includes six 80mm hot-swappable middle fans with two optional 80mm rear fans. In addition to seven slot openings, the RM417 (6.9 x 17.1 x 27.5 inches) provides a 2U 1+1 redundant 1400W PSU, two USB 2.0 ports on the front, an intrusion switch, standard rear window, and Mini-SAS 6G backplane or support for a SAS expander on backplane. Options include the ability to report fan, RPSU, and temperature monitoring status via the motherboard through USB or COM port compatibility.

RM418 4U Modular Storage Server Chassis. In addition to including support for a 6G Mini-SAS backplane, the RM418 (model RM41824) provides an option for a 3G/6G SAS expander card to further expand storage. The RM418 supports ATX, extended ATX, and CEB motherboards and includes seven slot openings. Additionally, the chassis (6.9 x 17.1 x 27.5 inches) includes two USB 2.0 ports on the front, four 80mm hot-swappable middle fans and two optional 80mm rear fans, an intrusion switch, standard rear window, and 2U 1+1 redundant 960W PSU. As with the RM417, options include the ability to report fan, RPSU, and temperature monitoring status via the motherboard through USB or COM port compatibility.

Custom Solutions

Of course, sometimes you require a special piece of equipment to solve a problem, address an issue, or take advantage of an opportunity. When you need a custom solution—when off-the-shelf equipment won't quite do the job and you find that you need equipment tailored to your exact specifications and requirements—Chenbro is well-equipped to deliver. In fact, it has been doing so for about 28 years, offering customized enclosures of various types for security, networks, kiosks, health care, gaming, and the military. The Chenbro team offers strong design capabilities and expertise in stamping and pressing, laser cutting, plastic injection, and other technologies that are key to quickly and affordably providing you the custom solution you need. P

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SERVERS PRODUCT SPOTLIGHT

Blade Servers

Product

AMAX BladeMax AS-7200G

Description

The AMAX BladeMax AS-7200G is an advanced 7U 20-GPU blade server delivering high density and performance with a maximized number of GPUs per 1U rack space. The AS-7200G offers a reliable and energy-efficient architecture boasting 8,960 CUDA cores and 20.6 teraflops of precision performance in a single chassis. The system delivers the maximum performance with the best CPU-to-GPU balance and optimized I/O.

- Supports 20 Nvidia Tesla GPUs in 7U space
- Delivers 8,960 CUDA cores and 20.6 teraflops of precision performance in a single chassis
- Boasts up to 94% power efficiency with Platinum-level redundant power supplies
- Delivers maximum performance with the best CPU-to-GPU balance and optimized I/O

Best For: Compute-intensive scientific and research environments utilizing high-performance computing applications in a broad array of markets.

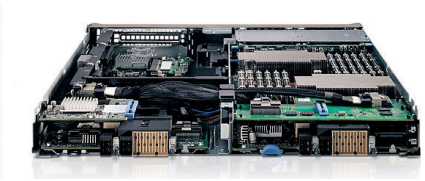
Appro GPU Expansion Blades based on the Appro GreenBlade System

The GPU Expansion Blades from Appro are based on the company's GreenBlade System and are available in a 5U form factor. They're configured as a CPU/GPU combination supporting five dual-CPU server blades with five dual-GPU expansion blades per system. The system offers configuration flexibility, density, reliability, and energy efficiency with affordable mix-and-match compute blade options.

- Two GPUs per blade server based on Nvidia Tesla M2050
- Two CPUs per blade server based on AMD Opteron or Intel Xeon processors
- Five blade servers per system total of 10 CPUs/10 GPUs in a 5U form factor
- Up to 4,480 GPU cores per system
- GPU power control capabilities for thermal management and power savings

Best For: Energy, government research, university, finance, and bioinformatics institutions.

Dell PowerEdge M610x



The PowerEdge M610x blade server from Dell can support up to two standard full-height and full-length PCI-E cards. The M610x comes with supplemental power and modular cooling with support for one 300-watt or two 250-watt cards.

- Equipped with the Nvidia Tesla GPGPU card that can support 400 gigaflops of double-precision computations
- Houses the Intel Xeon 5600 series processors in addition to 192GB of DDR3 memory
- Features two embedded Broadcom NetXtreme II 5709 Gigabit Ethernet NICs with failover
- Management tools include Dell Management Console, Altiris Deployment Solution, integrated Dell Remote Access Controller, and vMedia

Best For: Organizations seeking the reliability, efficiency, and manageability of a blade server solution but with unique I/O or computational needs.

Price: Starts at $3,892

Product

HP ProLiant BL685c G7

Description

The HP ProLiant BL685c G7 features the latest AMD Opteron 6100 series processors, multicore scalability, and integrated HP Virtual Connect FlexFabric architecture, which helps simplify network connections and lower infrastructure costs. The HP ProLiant BL685c G7 server delivers twice the performance at prices starting at 30% lower than the previous generation.

- Simplifies management and lowers infrastructure costs by converging LAN and SAN traffic over the same flexible connection
- iLO3 (Integrated Lights-Out 3) Advanced technology helps simplify remote management
- HP Insight Control software improves management productivity while reducing operational expenses

Best For: Virtualization and compute-intensive database applications.

Price: Starts at $9,869

NEC Express5800 SIGMABLADE B120a-d

NEC's Express5800 SIGMABLADE two-socket blade server is built without any internal storage; it can boot from a virtualization SAN or with NEC AD106a attached storage. Key benefits include Intel Quick Path Interconnect technology for enhanced overall performance. The B120a-d's expanded I/O capabilities support up to six Gigabit ports and can manage more I/O bandwidth.

- Features the Intel 5520 Chipset
- Includes 12x DDR3-1066 Registered DIMM with 96GB max capacity
- Comes with NEC EXPRESSCOPE Engine 2 server management software
- Compatible with NEC H-Chassis and NEC M-Chassis
- Integrated video memory

Best For: Server environments where a SAN-based boot environment is best.

NEC Express5800 SIGMABLADE B140a-T

With four-socket support and 16-core processing, the NEC Express5800 SIGMABLADE B140a-T blade server is designed for longevity. The B140a-T can efficiently run standard applications, clustered applications, databases, and hypervisor platform solutions. The server is designed for virtualization and comes with 128GB memory capacity and expanded I/O Gigabit and Fibre Channel bandwidth. In addition, it's compatible with high-availability software and includes integrated system management features.

- Shared server components mean reduced overall power consumption
- Intel 7000 series four-socket Xeon processors offer high throughput
- Up to six I/O Gigabit ports plus two Fibre Channel ports
- ExpressBuilder software manages configuration and OS installation

Best For: Data centers interested in integrated system management through a virtualized environment.

Processor's Product Spotlight highlights options available in key data center product categories, providing product information side-by-side for easy comparison.

Compiled by Joanna Clay

Dell PowerEdge M710HD

The Dell PowerEdge M710HD is a two-socket, half-height, memory-dense blade server that offers tremendous I/O throughput, maximized memory density, and robust optional Intel Xeon 5600 processing power, all in an ultra-dense form factor with high availability. The M710HD also features enterprise-class redundancy with hot-swap fault-tolerant SAS or SSD hard drives and optional failsafe redundant embedded hypervisors.

- All the memory density of a full-height PowerEdge M710 (18 DIMMs) packed into an ultra-dense half-height blade
- Built-in simplified system management tools take the guesswork out of administration
- Flexible, robust throughput options for customers with networking or bandwidth needs that change and grow over time

Best For: Server rooms and corporate data centers that require a reliable, high-density blade solution that can maximize total RAM for virtualization and workload consolidation.

Price: Starts at $2,282

Fujitsu PRIMERGY BX400

The PRIMERGY BX400 from Fujitsu is a compact rack-mount or floor-stand blade server that provides a "data center in a box," encapsulating Intel Xeon servers and storage in an all-in-one bundle. With an Executive Dash Panel that provides a common interface to multiple administrative duties, the BX400 is aimed at small to medium-sized enterprises that want to minimize their investment in servers and storage yet still have a sophisticated high-end server/storage solution with room to grow. Augmenting its storage capabilities, the BX400 integrates the NetApp Data ONTAP-v storage management software to offer NFS, CIFS, and iSCSI access along with the rich data management functions of the NetApp ONTAP-v software.

- Up to eight dual-socket BX920, BX922, or BX924 server blades
- Rackmount and floor-stand versions
- Only 45dB noise level, perfect for branch office application
- Executive Dash Panel to help non-IT specialists control all administrative duties
- Up to two integrated NetApp Data ONTAP-v storage solutions offering up to 6TB storage each

Best For: Small to midsized enterprises that want a simplified all-in-one solution.

Price: Starts at $4,653

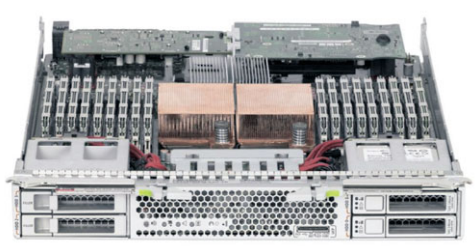
Fujitsu PRIMERGY BX900

Fujitsu's PRIMERGY BX900 is a blade server that can host a wide variety of applications, such as general-purpose Web front ends, high-performance computing, optimized virtualization platforms, and large symmetrical multiprocessor database hosting. The BX900's use of Fujitsu's Cool Safe cooling technology, 92% efficient power supplies, and ServerView Power Management software provides dynamic power and cooling. The server offers high availability, protecting against failure and providing automatic recovery. Within the common administrative/network domain, the BX900 blade server can scale up to 72 blades.

- Includes the latest Intel Xeon 5600 and 7500 processors with up to 512GB of memory
- 18 half-height blades in a 10U chassis
- Up to eight I/O connection blades feature Gigabit, 10Gb, Fibre Channel, and InfiniBand
- Two types of storage blades, ranging from four-disk boot storage to 10-disk SAS enclosures

Best For: Data centers that would benefit from a flexible and dynamic server infrastructure in a cost-effective chassis.

Oracle Sun Blade X6270 M2 Server Module



The Sun Blade X6270 M2 server module from Oracle is ideal for virtualized application environments where efficiency and flexibility matter. Powered by the six-core Intel Xeon 5600 series processor, the Sun Blade X6270 M2 is easy to deploy and upgrade and is ideal for running virtualized business applications and enterprise collaboration workloads. With the combination of the Sun Blade Storage module, virtualized Network Express modules, the Sun Blade 6000 chassis, and Oracle Integrated Lights Out Manager, you get an efficient single-point management solution under one infrastructure, which helps to reduce complexity and OPEX costs.

- One or two six-core Intel Xeon 5600 series processors at up to 3.46GHz
- PCI-E ExpressModules enable each blade to have its own unique I/O configuration
- Full-featured management at no additional charge with Oracle single system management
- High-capacity memory with 18 DIMM slots
- 282Gbps I/O bandwidth for data-intensive workloads

Best For: Organizations using virtualized business applications or enterprise collaboration workloads.

Supermicro SuperBlade TwinBlade

As the newest addition to Supermicro's SuperBlade family, the innovative TwinBlade doubles the number of dual-processor compute nodes per 7U enclosure to 20, allowing for up to 120 DP servers per 42U rack for a dense, cost-effective solution. Based on the SBI-7226T-T2 blade supporting the latest Intel Xeon 5600 Series processors, this system delivers unprecedented performance per dollar and per square foot. Available with dual 40Gbps QDR InfiniBand switches, this blade solution features industry-leading 94% power supply efficiency.

- 20 DP (Intel Westmere and AMD G34) nodes in a 7U enclosure
- 128GB ECC-registered DDR3 per DP node
- Dual 40Gb InfiniBand, 10GbE, and 8Gb FCoE switches
- Dual 1/10Gb Layer 2/3 Ethernet switches
- Centralized remote management via IPMI 2.0 or KVM over IP

Best For: High-performance computing in data center, enterprise, and cloud computing deployments.

Contact: (408) 503-8000 | www.supermicro.com

Supermicro SuperServer 5086B-TRF

The SuperServer 5086-TRF from Supermicro is a high-performance 5U 8-way server that boasts Intel Xeon 7500 series processors. The system includes 10 PCI-E 2.0 expansion slots and 64 DIMM slots for up to 2TB of storage. You can use up to six onboard SATA2 ports, and the 2,800W redundant power supplies meet the 80 PLUS Gold standard.

- Supports up to 24 2.5-inch hot-swap SAS/SATA hard disk drives
- Onboard BMC (baseboard management controller) supports IPMI 2.0 and KVM with a dedicated LAN
- Features an Intel 82576 dual-port Gigabit Ethernet controller
- Main memory cards insert vertically into motherboard

Best For: Enterprises that need maximum scalability and a balanced server architecture.

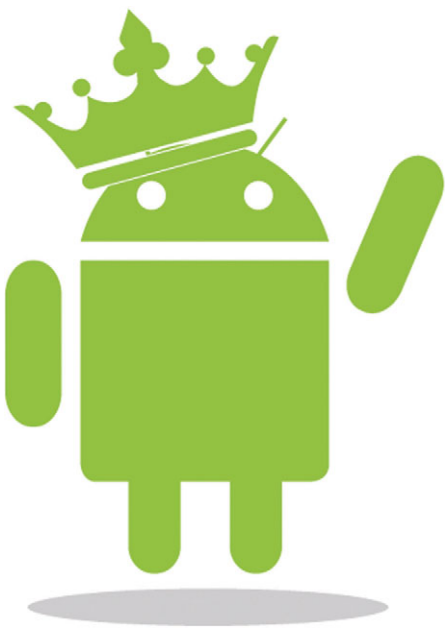
Contact: (408) 503-8000 | www.supermicro.com

News

Microsoft Ecosystem Generates $580 Billion In Sales

According to an IDC study, the huge worldwide partnership that constitutes the Microsoft "ecosystem" generated revenues of $580 billion in 2010, an 8% increase over the previous year and a 22% gain over 2007. The study, commissioned by Microsoft, also found that partners who invested in acquiring Microsoft product certifications scored bigger deals and generated more revenue per employee. Although it didn't provide numbers for 2010, the study found that for every $1 of revenue made by Microsoft in 2009, members of the partner ecosystem generated $8.70 for themselves.

Android To Continue Lead In Smartphone OS Market



According to a report from ABI Research, of the 302 million smartphones shipped last year, 69 million were running Google's Android operating system. The research firm predicts that by 2016, about 45% of all smartphones will be Android devices. In the wake of the end of Symbian OS, ABI expects Android, Samsung's Bada, and BlackBerry to fill the void, leading to growth for all three platforms. Apple's iOS (15% of the market) is expected to maintain moderate but steady growth, ABI Research reports, while RIM (16% of the market) will likely lose a bit of ground to other players.

GAO: H-1B Visas Benefiting Few, Hurting U.S. Workers

The controversial H-1B visa program for the importation of skilled foreign workers is plagued with confusion, disproportionate benefits, toothless oversight, and weakened protection for U.S. workers. So says the Government Accountability Office after researching information from the past decade. Less than 1% of businesses account for nearly 30% of H-1B workers. This tiny group consists mainly of staffing companies, from which businesses hire contract workers, often without triggering a legal obligation to abide by the H-1B program's domestic worker protection rules such as prevailing wage requirements. Moreover, oversight is diffused among four agencies.

Two Charged With Insider Trading

The U.S. Securities and Exchange Commission has charged two men with using insider knowledge of several high-profile mergers to accrue illegal profits over the past five years. Lawyer Matthew Kluger and his stock trader cohort Garrett Bauer, as well as an unnamed third person who acted as a go-between for the defendants, allegedly used knowledge Kluger gained from his position at legal advisory firm Wilson Sonsini Goodrich & Rosati to make trades ahead of almost a dozen high-profile mergers, including Sun/Oracle, McAfee/Intel, and 3Com/HP. The two netted about $32 million in profits from their trades.

Doctors Going Electronic

Challenges To EHR Adoption

by Jean Thilmany

• • •

Under the 2009 American Recovery and Reinvestment Act, physician practices can qualify for $44,000 in Medicare or $64,000 in Medicaid incentives—beginning this year—to implement electronic health record systems. Those not adopting the systems by 2015 will be penalized financially.

With those kinds of incentives behind system adoption, the EHR industry is set to take off, says Antonio Arias, senior vice president of business development at medical software maker NCG Medical (www.ncgmedical.com). But many physicians still hold the same concerns that kept them from implementing the systems in the first place, Arias adds. These include workflow readjustment, training, and cost.

A CDW Healthcare (www.cdwg.com) survey found that, when asked to rank their top three concerns, 66% of physician practices looking to implement an EHR system rated system costs as their top concern; 52% ranked time associated with staff training as a top concern, and 43% ranked workflow readjustment as a major concern, says Jonathan Karl, director of sales for CDW Healthcare.

While those are persistent concerns that won't be diminishing any time soon, both Arias and Karl say many solutions and methods available today help physicians get around those issues.

Overcoming Obstacles

The best way to meet concerns is to ensure EHR adoption takes place as swiftly and goes as smoothly as possible, Karl says. To that end, he recommends IT managers at physician practices determine if they can upgrade systems rather than fully replace them. "Look at the infrastructure you have today and work with your IT partner to figure out what needs to go and what could stay," he says. "Many doctors have equipment less than three years old and a new records-management system doesn't mean you need to replace that; you might just need memory upgrade."

Those already running a client-server model and planning to implement a client-server EHR system might be able to use their existing servers to run the new system. Or they might find offloading other applications—such as email and security applications—to another server will free up space for the new system and save money to boot, Karl says.

He recommends physician practices "train and train some more" when it comes time for EHR implementation. Some (22%) of the physician practices surveyed by CDW Healthcare said they expect to spend around 10 hours on staff training. "I would say that's a minimum," Karl says. "The more upfront investment you make in training, the easier and smoother your adoption will be and the quicker you can recoup your investment. It'll make adoption a less stressful event and give you the ability to hit meaningful use much earlier."

He recommends physician practices ensure their chosen EHR vendor offers necessary training and has the bandwidth needed for training. In this age of new-system adoption, many EHR vendors might no longer be able to keep up with bandwidth requirements for training, Karl says.

Why Now?

The industry is set to explode this year after two years of stagnancy because 2011 is the first year federal incentives kick in for physicians to bring in an EHR system, NCG Medical's Arias says. Those poised to buy these systems have been holding off since the American Recovery and Reinvestment Act passed two years ago.

The federal government gave the nod to the incentives because these systems capture medical information from patients in a way that can be contained within a data management system and analyzed across a wide population. Narrated notes on patient status—the method widely used now by doctors—doesn't capture information in a way that's reportable, Arias says.

"As medicine becomes more specialized, each doctor has a silo of information and the inefficiency happens when they try to share that with one another," he says. "From a technology perspective, you have to fax information back and forth and doctors are scared to death to trust someone else's notes."

"It's an inefficient system, and it causes an immense amount of redundancy in medical procedures," he adds. "And to add to inefficiency, the insurance companies are the ones that pay for this." Thus the reimbursement incentive.

Widespread EHR adoption would also allow for a national healthcare record, whereby researchers could analyze areas or population groups to discover incidences of certain kinds of cancer, or the like, when conducting medical research, Arias adds.

Though EHR systems have been around for about 40 years in one form or another, Arias estimates that only 10 to 20% of private physician practices have one in place today.

Although the federal incentive program is set to change that, the system vendors themselves hope to offer systems that can help physicians get around barriers to adoption they were formerly unwilling to overcome. P

Key Points

- Federal monetary incentives begin this year for physicians to implement electronic health records systems.
- Doctors have been slow to adopt the system in the past because they fear stepped-up training time, system costs, and workflow changes.
- With the push to implement, many EHR vendors are now directly addressing those concerns.

> "The more upfront investment you make in training, the easier and smoother your adoption will be and the quicker you can recoup your investment."
>
> *- CDW Healthcare's Jonathan Karl*

Physician Protection

A CDW Healthcare (www.cdwg.com) report found that 30% of physician practices surveyed didn't have antivirus protection in place on their electronic health record system and 34% didn't have a firewall in place, says Jonathan Karl, director of sales for CDW Healthcare. He suggests these practices work closely with their EHR vendor to ensure proper system security.

Michael Magrath, director of North American business development for Gemalto (www.gemalto.com), a provider of digital security products, believes physicians should look beyond common password-protected systems. These systems should include a smartcard, hard token, or another means—secondary to a password—for a user to identify herself to the system before it can be used, he says.

Magrath cites the NIST "Guide to Enterprise Password Management" report, which says, "There are many types of threats against passwords, and most of these threats can only be partially mitigated." The report says, "Organizations should make long-term plans for replacing or supplementing password-based authentication with stronger forms of authentication for resources with higher security needs."

Do You Need A Warranty?

Weigh The Costs & Do Your Homework Before Seeking Warranties For Used Equipment

by Dan Heilman

• • •

Warranties can be tricky: In many cases, they're a worthwhile protective measure, but for some products, by virtue of what they cost and how long they're expected to last, the equipment simply isn't worth a warranty. So how do you know whether a warranty is worth it when it comes to used or refurbished equipment?

Consider the equipment's criticality. The answer to the puzzle of whether to go with a warranty or buy as is depends largely on what you're buying. For mission-critical hardware whose failure could cripple your enterprise, it's probably wise to get maximum protection.

As for component parts or lower-priced equipment that your data center purchases in quantity, a warranty often isn't necessary, according to Morris Scott, president of DMD Systems Recovery (www.dmdsystems.com).

"If it's equipment that you have a lot of experience with—maybe something you have a lot of, like disc drives—you shouldn't mind buying as-is," Scott says. "Most equipment of that kind comes with a 30- to 90-day warranty if you're buying from a reputable dealer. With something like disc arrays, if they're bad, they're going to fail right away. If they don't, they'll last a long time. Same with servers—they're fairly inert."

Scott recommends looking at the cost of the warranty vs. the per-unit cost of replacing the equipment. "If you're ghosting drives and one drive fails and doesn't cost much to replace, I'd be fine with a 30-day warranty," he says. "If it was going to fail, it would fail on the front end."

Buy from a quality dealer. Some vendors remove the question of whether to buy a warranty by providing them automatically. Scott says that this can be a valuable source of goodwill between vendors and their customers.

"If you're a vendor, it's not in your interest to have equipment fail," he says. "You've got to ask yourself if it's worth stiffing a customer over a single $50 disc drive. It's not if you want to continue selling them equipment. Most vendors who have been around awhile understand that it's not worth upsetting customers."

Buy equipment that is still supported. To some experts, if you buy used, warranties are essential. The possibility of sacrificing uptime for a few dollars is simply too great a risk.

"The enterprise and data center markets are all about uptime," says Darrell Rodgers, president of Emerald Data Networks (www.emeralddata.net). "You want low turnover, high support, and long-term solutions. You can't afford to use older equipment that has to be swapped out more often. This causes additional downtime. You also can't afford to save a few dollars to buy something that's no longer supported." P

Find Used & Refurbished Equipment For Sale

Once you've made the decision to purchase used or refurbished equipment, finding the equipment you need is easy with Processor's online Data Center Products For Sale Database.

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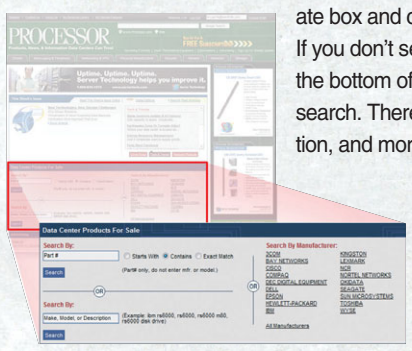

Don't know the specific part number or model? Use the drill-down search on the Processor home page to view results from specific manufacturers. Simply click the manufacturer name, and you'll see a list of all equipment listings from that manufacturer.

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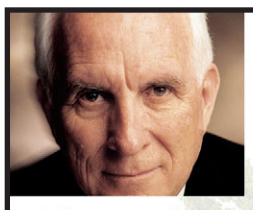
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April 26, 1 to 4 p.m.
New Horizons Dallas
150 W. John Carpenter Freeway, Suite 100
Irving, Texas
http://tinyurl.com/NHDallas426

April 27, 9 a.m. to noon
New Horizons Fort Worth
4100 International Plaza, Suite 200
Fort Worth, Texas
http://tinyurl.com/NHFtWorth427

April 28, 1 to 4 p.m.
New Horizons San Antonio
8200 IH-10 West, Suite 500
San Antonio, Texas
http://tinyurl.com/NHSanAntonio428

April 29, 9 a.m. to noon
New Horizons Austin
300 Highland Blvd., Suite 100
Austin, Texas
http://tinyurl.com/NHAustin429

AITP St. Louis
April 28, 5:30 p.m.
Crowne Plaza Clayton
7750 Carondelet Ave.
St. Louis, Mo.
stlouisaitp.org

Search Optimization Series: Social Media For Business
April 28, 10 to 11:30 a.m.
New Horizons Cincinnati
10653 Techwoods Circle
Cincinnati, Ohio
http://tinyurl.com/NHCincinnati428

ISSA Metro Atlanta
April 29, 6:30 p.m.
SecureWorks
One Concourse Parkway NE, 5th Floor
Atlanta, Ga.
www.gaissa.org

MAY

Cincinnati Programmers Guild
May 5, 6:30 to 8:30 p.m.
Max Technical Training
4900 Parkway Drive, Suite 160
Mason, Ohio
www.maxtrain.com//pages.aspx?pagename=ITAssociations

SharePoint User Group
May 5, 6 to 8 p.m.
Max Technical Training
Mason, Ohio
www.maxtrain.com//pages.aspx?pagename=ITAssociations

Central Plains ISSA
May 6, 1 p.m.
Wichita Marriott Restaurant
9100 E. Corporate Hills Drive
Wichita, Kan.
issa-cp.org

Interop
May 8-12
Mandalay Bay Convention Center
Las Vegas, Nev.
www.interop.com

Cloud Computing Users Group
May 9, 6 p.m.
Platform Labs
1275 Kinnear Road
Columbus, Ohio
www.platformlab.org

Configuring & Troubleshooting A Windows Server 2008 Network Infrastructure
May 9-13, 6 p.m.
Online Live
www.nhnorthflorida.com

Cyber Security Strategies Summit
May 10-12
Kellogg Conference Center
Washington, D.C.
cybersecuritystrategiessummit.com

Agile Product Leadership Network
May 12, 6 to 8 p.m.
4900 Parkway Drive
Suite 160
Mason, Ohio
www.maxtrain.com//pages.aspx?pagename=ITAssociations

AITP Research Triangle Park
May 12
University Club
4200 Hillsboro St.
Raleigh, N.C.
www.rtp-aitp.org

Cincy SQL
May 12, 6 to 8 p.m.
Max Technical Training
4900 Parkway Drive
Suite 160
Mason, Ohio
www.maxtrain.com//pages.aspx?pagename=ITAssociations

Cisco (TSHOOT): Troubleshooting and Maintaining Cisco IP Networks
May 16-20, 9 a.m.
Online Live
www.nhnorthflorida.com

Configuring Windows Server 2008 Active Directory Domain Services
May 16-20, 6 p.m.
Online Live
www.nhnorthflorida.com

Installing & Configuring Windows 7 Client
May 16-20, 6 p.m.
Online Live
www.nhnorthflorida.com

AITP Oklahoma City
May 17
aitpokc.org

AITP Southwest Missouri
May 17
aitpspringfield.org

PASS Minnesota
May 17
passmn.org

AITP Omaha
May 19
aitpomaha.com

ISSA Northern Virginia
May 19, 5:30 p.m.
issa-nova.org

CinARC Software Architects
May 19, 6 to 8:30 p.m.
Max Technical Training
4900 Parkway Drive, Suite 160
Mason, Ohio
www.maxtrain.com//pages.aspx?pagename=ITAssociations

SIM Minnesota
May 19, 2:30 p.m.
Northland Inn
7025 Northland Drive N.
Minneapolis, Minn.
www.simnet.org

Configuring Identity & Access Solutions with Windows Server 2008 Active Directory
May 23, 6 p.m.
www.nhnorthflorida.com

VMware vSphere: Install, Configure, Manage v 4.1
May 23, 8 a.m.
Platform Labs
1275 Kinnear Road
Columbus, Ohio
www.platformlab.org

AITP Akron-Windows Phone 7
May 24
Buffalo Wild Wings
5050 Eastpointe Drive
Medina, Ohio
www.akron-aitp.org/index.htm

Green Data Center Conference
May 24-26
Marines' Memorial Club & Hotel
San Francisco, Calif.
www.greendatacenterconference.com

AITP St. Louis
May 26, 5:30 p.m.
Crowne Plaza Clayton
7750 Carondelet Ave.
St. Louis, Mo.
stlouisaitp.org

ISSA Metro Atlanta
May 26, 6:30 p.m.
SecureWorks
One Concourse Parkway NE, 5th Floor
Atlanta, Ga.
www.gaissa.org

JUNE

Cincinnati Programmers Guild
June 2, 6:30 to 8:30 p.m.
Max Technical Training
4900 Parkway Drive, Suite 160
Mason, Ohio
www.maxtrain.com//pages.aspx?pagename=ITAssociations

AITP Region 18 Spring IT Conference
June 18, 8 a.m. to 5 p.m.
Holiday Inn-Akron West
4073 Medina Road
Akron, Ohio
www.aitp-region18.org/ITCon/

Do you have an event you'd like to see listed? Send an email to feedback@processor.com.

Processor Solutions Directory

Here are brief snapshots of several companies offering products designed for the data center and IT industry. Listings are sorted by category, making it easy for you to find and compare companies offering the products and services you need.

You can find more detailed information on these companies and the products they offer inside this issue.

To list your company and products, call (800) 247-4880.

Physical Infrastructure

AVTECH

AVTECH Software, founded in 1988, is focused on making the monitoring and management of systems, servers, networks, and data center environments easier. AVTECH provides powerful, easy-to-use software and hardware that saves organizations time and money while improving operational efficiency and preparedness. AVTECH products use advanced alerting technologies to communicate critical status information and can perform automatic corrective actions.

Products Sold:

A full range of products that monitor the IT and facilities environment, including temperature, humidity, power, flood, room entry, and UPS

(888) 220-6700 | www.AVTECH.com

Physical Infrastructure

BayTech

BayTech was founded in 1976 and, since the 1990s, has developed unique products for remote power management. The company uses printed circuit board instead of wires for a better, more resilient connection between the data center equipment and the receptacle. BayTech provides an extensive Web site with brochure downloads, warranty information, and reseller support and also offers evaluation units for data centers.

Products Sold:

- Power control, distribution, management, and metering
- Power transfer switches
- Console management and remote site management

(800) 523-2702 | www.baytech.net

Physical Infrastructure

CYBER SWITCHING®

Cyber Switching is an innovator and manufacturer of power management solutions used to distribute power throughout an entire data center, from the building infrastructure to the rack level. Cyber Switching products provide companies with quality power data throughout the data center, enabling them to make sound, informed decisions regarding their power grid. Located in San Jose, Calif., Cyber Switching began pioneering power distribution technologies in 1994 and continues to design and develop innovative and technically advanced power solutions such as the ePower, PM8, Dualcom S, EMC, Galaxy Series, E Series, and PS Series.

Products Sold:

- Intelligent power management
- Value-added power management
- Metered power distribution
- Three-phase power distribution
- Energy management and control
- Switches

(888) 311-6277 | www.cyberswitching.com

Physical Infrastructure

DATA AIRE INC.

Data Aire got its start more than 40 years ago designing precision air processing systems to meet the need for total environmental control. Its equipment can now be found in computer rooms and data processing centers of all sizes. Data Aire's expert, knowledgeable sales and engineering staffs and its range of product configurations and options ensure you'll find the right solution.

Products Sold:

- Floor-mounted units
- Ceiling-mounted units
- High-heat density solutions
- Specialty units
- Heat exchangers
- System controls

(800) 347-2473 | www.dataaire.com

Physical Infrastructure

DATA CENTER DEPOT

A Gaw Associates, Inc. Company

Data Center Depot prides itself on providing the best selection, pricing, and support for data center products. Our diversified product line can meet the specific needs of data center managers responsible for virtually any type of corporate setup. We are a major manufacturer and also distribute the product lines for top companies in the industry. Most of our products are available via our online store, but we encourage you to contact us so we can help you find the right products for your requirements and budget.

Products Sold:

- Data cabinets, racks, and accessories
- LAN and NOC furniture
- Consoles and monitor walls
- Power supplies
- Cable ladders
- Patch panels
- Storage furniture

(877) 429-7225 | www.DataCenterDepot.com

Physical Infrastructure

hergo®

TECHNICAL WORKSPACE SOLUTIONS

Based in New York City, Hergo Ergonomic Support Systems is an independent designer and manufacturer of enclosure cabinet solutions, technical computer furniture, and modular racking systems. The company's products are designed to promote organization in the workspace and to increase the productivity of computers, peripherals, and communications equipment. Hergo is known for its high-quality products and superior customer service.

Products Sold:

- Racks
- Enclosures/cabinets
- Motorized workstations
- Flat-panel arms
- Computer desks
- Cable management
- Power management

(888) 222-7270 | www.hergo.com

Physical Infrastructure

ISC™ Information Support Concepts, INC

Leading Information Technology Products Since 1987

For more than 25 years, Texas-based Information Support Concepts has been a leading provider of a variety of data center and telecom solutions, marketed directly and through VARs. ISC prides itself on identifying the needs of today's fast-paced and ever-changing computing environments and providing products that meet those needs. ISC's online catalog ensures you'll always have the most current product options and information available, but if you don't see what you need, contact ISC—there's a good chance it can provide the custom solution right for you.

Products Sold:

A variety of products, including server racks, rackmount keyboard monitors, KVM switches, tech furniture, PDUs, patch panels, wallmount cabinets, and rackmount accessories

(800) 458-6255 | www.iscdfw.com

Physical Infrastructure

CLAYTEK by iStarUSA Group

Claytek, part of iStarUSA Group, is a leading provider of server cabinets, racks, and related accessories. Since its founding in 2005, Claytek has grown tremendously because of reliable and innovative design and product quality. In addition, customers find that Claytek offers some of the most affordable solutions the market has to offer.

Products Sold:

- Cabinet enclosures
- Wallmount solutions
- Open-frame racks
- Special applications
- Rack- and cabinet-related accessories

(626) 303-8885 | www.istarusa.com

Physical Infrastructure

ITWatchDogs

ITWatchDogs manufactures environmental monitors that help prevent downtime from climate- and power-related issues. Its Web-enabled monitors let users keep an eye on remote conditions from a secure Web interface and receive SNMP, email, SMS and voice call alerts when specified alarm thresholds are exceeded for external factors, including temperature, humidity, airflow, power failure, smoke, water detection, and more.

Products Sold:

- Climate monitors
- Power monitors
- Digital and analog sensors
- IP surveillance cameras

(512) 257-1462 | sales@itwatchdogs.com | www.itwatchdogs.com

Physical Infrastructure

MOVINCOOL

THE #1 SPOT COOLING SOLUTION

The MovinCool division of DENSO Sales California has pioneered the use of portable air conditioning solutions for a variety of North and South American markets since 1982. MovinCool works with a national network of distributors and suppliers to provide product sales, installation, and rental.

Products Sold:

- Office Pro Portable Air Conditioner Series for indoor environments such as server and telecom rooms
- Classic & Classic Plus Portable Air Conditioner Series for moisture removal, outdoor and industrial spot-cooling
- CM Series ceiling-mounted A/C for cooling server rooms, telecom closets, or anywhere space is limited

(800) 264-9573 | www.movincool.com

Physical Infrastructure

oncore

California-based Oncore Cables is a supplier of high-quality, custom copper and fiber assemblies that are made in the U.S.A. The company is backed by more than 20 years of industry experience and specializes in quick turnaround cable production simply because its customers shouldn't need to wait to get their networks up and running.

Products Sold:

- Fiber optic cables
- CAT 5e/CAT 6 cables
- Power cords
- ClearFit patch cables
- Custom coax cables
- Audio/video cables

(949) 777-2255 | www.oncorecables.com

Physical Infrastructure

PDUs direct

Established in 2008, PDUsDirect.com is an online wholesaler providing a select line of PDUs for server and networked environments. PDUs Direct's basic, metered, and switched Rack PDUs provide local and remote power management, power monitoring, and environmental monitoring. We pride ourselves in offering industrial-grade quality products at the lowest prices, with the fastest shipping (most orders shipped within 24 hours) and simplest purchase process.

Products Sold:

A complete line of 20A PDUs, including metered, basic, and switched.

(888) 751-7387 | pdusdirect.com

Physical Infrastructure

RACKMOUNT SOLUTIONS, Ltd
where customer service matters

Rackmount Solutions' mission is to listen to the IT engineer's specific needs and deliver superb-quality, high-performance products through continuous product innovation and operational excellence. We pride ourselves in providing quality customer service, products that fit your IT requirements, and solid value for your money.

Products Sold:

- Wallmount and server racks and cabinets, including sound proof, air conditioned, and large cable bundle
- Desktop/tabletop portable racks
- Shockmount shipping cases
- Bulk cable

(866) 207-6631 | www.rackmountsolutions.net

Physical Infrastructure

Rack Solutions®

RackSolutions has been serving the data center market for more than 10 years. All of our products are designed, engineered, built, and shipped under our own roof. We have product solutions available for every major OEM, but if one of our existing products doesn't fit your needs, our top-notch mechanical and electrical engineers can create the item you need from scratch, solving even the toughest installation design challenges. Best of all, we typically don't charge up-front fees for design services.

Products Sold:

Computer server racks, cabinets, shelves, and mounting products.

(888) 903-7225 | www.racksolutions.com

Physical Infrastructure

Racktivity

Redwood City, Calif.,-based Racktivity has been helping to make data centers more energy-efficient since 2008. The firm offers products and technologies that optimize customers' physical infrastructure layers to help them better manage energy consumption and recover quickly in the event of a failure. Its patent-pending EnergyDNA technology gives admins access to the Power Quality analytics they need to maintain the health of their data center racks. Proactive and predictive features also enable customers to maintain uptime on critical systems.

Products Sold:

- Power distribution units
- Energy and uptime management software

(650) 361-9700 | www.racktivity.com

Physical Infrastructure

SEALEZE®
A Unit of Jason Incorporated
Brush sealing solutions for over 30 years.

Sealeze has been providing high quality brush products and services for more than 25 years. Our goal is to exceed your expectations for service and quality. To make that possible, we manufacture all of our products in our factory in Richmond, Va., and operate under the ISO 9001-2000 Quality Management System to ensure we're manufacturing the highest quality product every time.

Products Sold:

- A complete line of brush seal products, including in-floor, surface mount, through-wall, and circular cable seals.

(800) 787-7325 | www.sealeze.com

Physical Infrastructure

SENSAPHONE®
REMOTE MONITORING SOLUTIONS

Sensaphone has been designing and manufacturing remote monitoring systems for more than 25 years and has more than 300,000 of its products in use. Sensaphone's product lineup offers a full range of devices with a broad number of features and applications designed to monitor your entire infrastructure and alert you to changes. All product engineering functions, including hardware and software design and circuit board layout and assembly, are performed at the Sensaphone facility in Aston, Penn.

Products Sold:

Remote monitoring solutions that provide email and voice alarm notification for problems related to temperature, humidity, water detection, power failure, and more.

(877) 373-2700 | www.sensaphone.com

Physical Infrastructure

Server Technology
Solutions for the Data Center Equipment Cabinet

Server Technology is committed to the PDU market with the largest group of engineers dedicated to power distribution and other solutions within the equipment cabinet. Advancements in device power monitoring help data centers monitor and improve their efficiency, and continuous research and development is fueled by companies that look to Server Technology for their custom cabinet power solutions.

Products Sold:

A complete line of cabinet PDUs, including Per Outlet Power Sensing (POPS), Rack Mount Fail-Safe Transfer Switch, Console Port access with remote power management, Switched, Smart, Metered, Basic, and -48 VDC

(800) 835-1515 | www.servertech.com

Physical Infrastructure

upsite technologies®

Upsite Technologies was founded in 2001 to address data center needs for products and solutions reaching far beyond standard engineering and consulting offerings. The company innovates elegantly engineered products specifically designed to maximize data center airflow efficiency, improve PUE, and increase heat density. Upsite designs and manufactures the LOK family of products, which provides superior sealing, maximum energy savings, and the best protection available for your IT equipment.

Products Sold:

- KoldLok Grommets
- HotLok Temperature Strips
- HotLok Blanking Panels

(505) 982-7800 | www.upsite.com

Networking & VPN

4ipnet®

4ipnet is a leading provider of networking devices for manageable, reliable, and secure wireless access. In an effort to meet changing market demands at the least possible cost, 4ipnet delivers a diverse array of turnkey, high-performance products and mission-critical applications to bring reliability and manageability to increasingly complex wireless networks.

Products Sold:

- WLAN controller
- Hotspot gateway
- Secure wireless office controller
- Indoor and outdoor access points
- Other networking accessories

+886-2-27187000 | www.4ipnet.com

Networking & VPN

cxtec®

Since 1978, CXtec has been helping customers keep their networks up and their costs down with equal2new® certified refurbished voice and networking hardware, CABLExpress® cabling and data center infrastructure solutions, and LIFECYLExpress® IT asset management and e-waste solutions. CXtec is an all-encompassing provider of reliable products and services for networking, voice, cabling and data center infrastructures.

Products Sold:

A full line of networking connectivity equipment, including switches, routers, adapters, copper and fiber optic cabling and cable management devices, as well as data center furniture, racks and cabinets, and storage.

(800) 767-3282 | www.cxtec.com

Networking & VPN

plixer International

Plixer International develops NetFlow Analysis solutions that monitor and report on the utilization of network resources. Plixer was founded in 1999 and merged with Somix Technologies in 2006. The company's solutions provide a holistic view regardless of equipment vendor. Plixer works with customers to ensure the tools quickly help pinpoint slowdowns in the network and the applications that depend on it.

Products Sold:

- Tools for analysis and reporting of resource utilization
- Software for monitoring and trending bandwidth usage
- Software for alarming based on unusual or potentially hazardous network traffic patterns

(207) 324-8805 | www.plixer.com

Networking & VPN

runaware™

Founded in 1999, Runaware™ is a leader in online software demo solutions and cloud computing initiatives. Runaware's TestDrive® consists of a suite of services, including all aspects of online marketing, customer profiling, lead capture, downloads, trial CDs, and a hosted interactive online demo environment. Runaware's Cloud Platform offerings let clients experiment and evaluate SaaS and PaaS using their own application without requiring any modifications.

Products Sold:

- TestDrive: Online demo solution
- TestDrive Insight: Demo recording analysis
- Runaware in the Clouds: Cloud platform offering

(954) 302-5340 | www.runaware.com

Networking & VPN

TALARI NETWORKS

Talari Networks pioneered APN (Adaptive Private Networking) technology for WAN virtualization, enabling enterprises to overcome reliability and predictability
issues with abundantly available public Internet bandwidth. With Talari, businesses can reduce WAN costs by 40
to 90% and increase bandwidth by using public connections to augment or replace expensive private ones, such as MPLS.

Products Sold:

The Mercury line of APN appliances for headquarters, remote office, data center, and SOHO deployments.

(408) 689-0400 I www.talari.com

Storage

WeBuyUsedTape.net

WeBuyUsedTape has been in the business of purchasing new, used, excess, and surplus magnetic media for more than 35 years. Our regulation-approved, secure data eradication processes and environmentally friendly disposal programs give organizations a safe and economic incentive for recycling used media. Customer service is one of our top priorities, backed by helpful, knowledgeable, and efficient team members. Obtain a no-obligation, confidential quote on your tape media today.

Services Offered:

Tape media buyback, secure data eradication, media disposal, and recycling

(800) 821-1782 I www.WeBuyUsedTape.net

Storage

ESS Data Recovery
www.datarecovery.com
real labs, real people,
REAL RECOVERY

DataRecovery.com (formerly ESS Data Recovery) was formed in 1996 as one of the first data recovery companies in the world. We have labs in Minnesota, Illinois, California, and Ontario, Canada, that service thousands of customers worldwide. We can work with almost any storage device, including large RAID arrays, data tapes, and any brand of hard drive.

Services Offered:

A complete line of data recovery services, including online backup, tape duplication, and secure data erasure.

(800) 237-4200 I www.datarecovery.com

Security

NETWORK BOX

The award-winning Network Box appliance is in the forefront of UTM (unified threat management), providing the next generation of firewall technology. Our global network of Security Operation Centers monitors, updates, and analyzes your Internet traffic 24/7. No matter the type of enterprise, we have a tailored security package to meet your requirements. And we have changed the way UTM appliances are now sold—you just pay a flat fee for the managed service, with no cost for the hardware.

Products Sold:

- Managed security, including Internet security, monitoring services, threat analysis, and compliance.

(888) 315-8886 I www.networkboxusa.com

Security

paloalto NETWORKS
the network security company™

Using patent-pending application-identification technologies, Palo Alto Networks reinvented the network firewall to provide companies unequaled visibility and control over the applications and related data coming into and out of company networks. Without negatively impacting performance, Sunnyvale, Calif.,-based Palo Alto Networks' firewalls can identify and categorize over 950 applications and enforce access policies on a per-user or per-group basis. These firewalls also have integrated IPS and provide content scanning to defend against modern threats to the enterprise.

Products Sold:

PA-4000 series, PA-2000 series, and PA-500 next-generation firewalls, with throughput up to 10Gbps.

(866) 320-4788 | www.paloaltonetworks.com

Servers

Portwell

Intel Embedded Alliance member American Portwell Technology is a wholly owned subsidiary of industrial computer innovator Portwell of Taiwan. It's known for its custom solutions as well as for its rackmount and embedded computers used in industrial, medical, retail, financial, semiconductor equipment, mission-critical, and network security environments.

Products Sold:

Embedded, single-board, and rackmount computers; specialty platforms; human-machine interfaces; and communication appliances

(510) 403-3399 | www.portwell.com

Servers

NEX COMPUTING SOLUTIONS

Chandler, Ariz.,-based NEX Computing Solutions provides rugged and reliable custom-built computer systems to dealers and resellers for telephony, CTI appliances, process control, video security recorders, computer-aided design applications, and more. NEX also offers customized system assembly and integration services, as well as in-warranty and out-of-warranty repair services, contract manufacturing, asset management, and custom engineering.

Products & Services Offered:

- Telephone servers
- Telephony computers
- CAD/CAM workstations
- Custom computers
- Repair depot, asset management, contract manufacturing, and private label configuration services

(855) 355-9252 | www.nexedge.com

Servers

SUPERMICRO®

When buying a server, you don't want a one-size-fits-all solution. Supermicro uses modular and interoperable Server Building Blocks to offer the highest levels of flexibility and customization possible to design servers tailored and optimized for your specific needs. Supermicro's focus on green computing leadership, system design expertise, and power-saving technologies ensures the products you purchase are energy-efficient and application-optimized.

Products Sold:

- Servers
- Motherboards
- Chassis
- Networking
- Storage

(408) 503-8000 I www.supermicro.com

Clients

CHENBRO

Chenbro is a leader in enclosure solutions, selling its products primarily to system integrators and OEM and channel partners. The company's extensive research and development efforts help it to keep its competitive edge and maintain market leadership, with special focus on thermal, EMI, and acoustic solutions. Taiwan-based Chenbro has offices in the United States, UK, The Netherlands, and China.

Products Sold:

- A comprehensive line of PC chassis, server/workstation chassis, rackmount chassis, and HDD enclosures.

(909) 947-3200 I www.chenbro.com

Clients

dtSearch®
www.dtsearch.com

Maryland-based dtSearch started research and development in text retrieval in 1988. The company is known for speedy adoption of new programming standards, OSes, and file types. Plus, it has a flexible licensing model. Typical corporate use of dtSearch includes general information retrieval, Internet and intranet site searching, and email archiving and email filtering.

Products Sold:

Text retrieval products, including:

- Desktop With Spider
- Network With Spider
- Publish For CD/DVDs
- Web With Spider
- Engine For Win & .NET
- Engine For Linux

(800) 483-4637 I www.dtsearch.com

Services

integrationpartners
BE CERTAIN.

Integration Partners is a leading, full-service voice and data network engineering firm specializing in unified communications and secure network infrastructure solutions. Its engineers know the technology and products inside and out, ensuring you get the right solution you need for a successful network. The Lexington, Mass.,-based company works with enterprises in a number of industries, including government, education, health care, and financial.

Services Offered:

- Network assessment and design
- Implementation and deployment
- Maintenance and monitoring
- Wireless infrastructure planning

(781) 357-8100 | www.integrationpartners.com

Services

Apto Solutions
Reuse I Recycle

Apto Solutions is a comprehensive provider of asset value recovery and disposition services that aims to get enterprises the most return on their hardware investments. The company specializes in decommissioned, excess, and off-lease hardware and has experience with all types of equipment, including notebooks, network hardware, telephony, servers, and storage devices.

Services Offered:

- Asset recovery, including strategic remarketing, data protection, and recycling
- Bankruptcy liquidation

(855) 275-2786 I www.aptosolutions.com

SUPERMICRO®

8/4-Way Scaling Up

The Evolution of IT

- Supports Intel® Xeon® processor 7500 and E7-8800/4800 product families (Up to 80 cores per system)
- Intel® 7500 Chipsets and 7510 Scalable Memory Buffers
- Supports up to 2TB* ECC Reg. DDR3 in 64 DIMMs
- Onboard 6Gb/s SAS (SAS 2.0) with hardware RAID (X8QB6-F)
- Up to 2800W/3200W Redundant Gold/Platinum Level High-Efficiency Power Supplies with I^2C & PMBus
- Integrated IPMI 2.0 Management + KVM with Dedicated LAN
- UP to 10x PCI-E 2.0 Slots for GPU Application
- Dual LAN with Intel® 82576 Gigabit Ethernet Controller
- Up to 24x 2.5" hot-swap SAS/SATA HDD/SSD devices
- Enterprise mission-critical applications, e-Commerce, virtualization, graphics, super-high computing performance

SYS-8046B-6RF/TRF

SYS-8016B-6RF/TRF

SYS-8026B-6RF/TRF

SYS-5086B-TRF

* Please check "Tested Memory List" on Supermicro website for compatibility
** Features may vary by model.

...It's In Our DNA!

94% 80 PLUS GOLD 80 PLUS PLATINUM

intel Xeon inside™

Powerful. Intelligent.

AMAX	Arrow Electronics	ASI	Bell Micro	Ingram Micro	MA LABS	Synnex	Tech Data
1-800-800-6328	1-888-427-2250	1-800-2000-ASI	1-800-232-9920	1-800-456-8000	1-408-941-0808	1-800-756-5974	1-800-237-8931
www.amax.com	www.arrownacp.com	www.asipartner.com	www.bellmicro.com	www.ingrammicro.com	www.malabs.com	www.synnex.com	www.techdata.com

www.supermicro.com

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